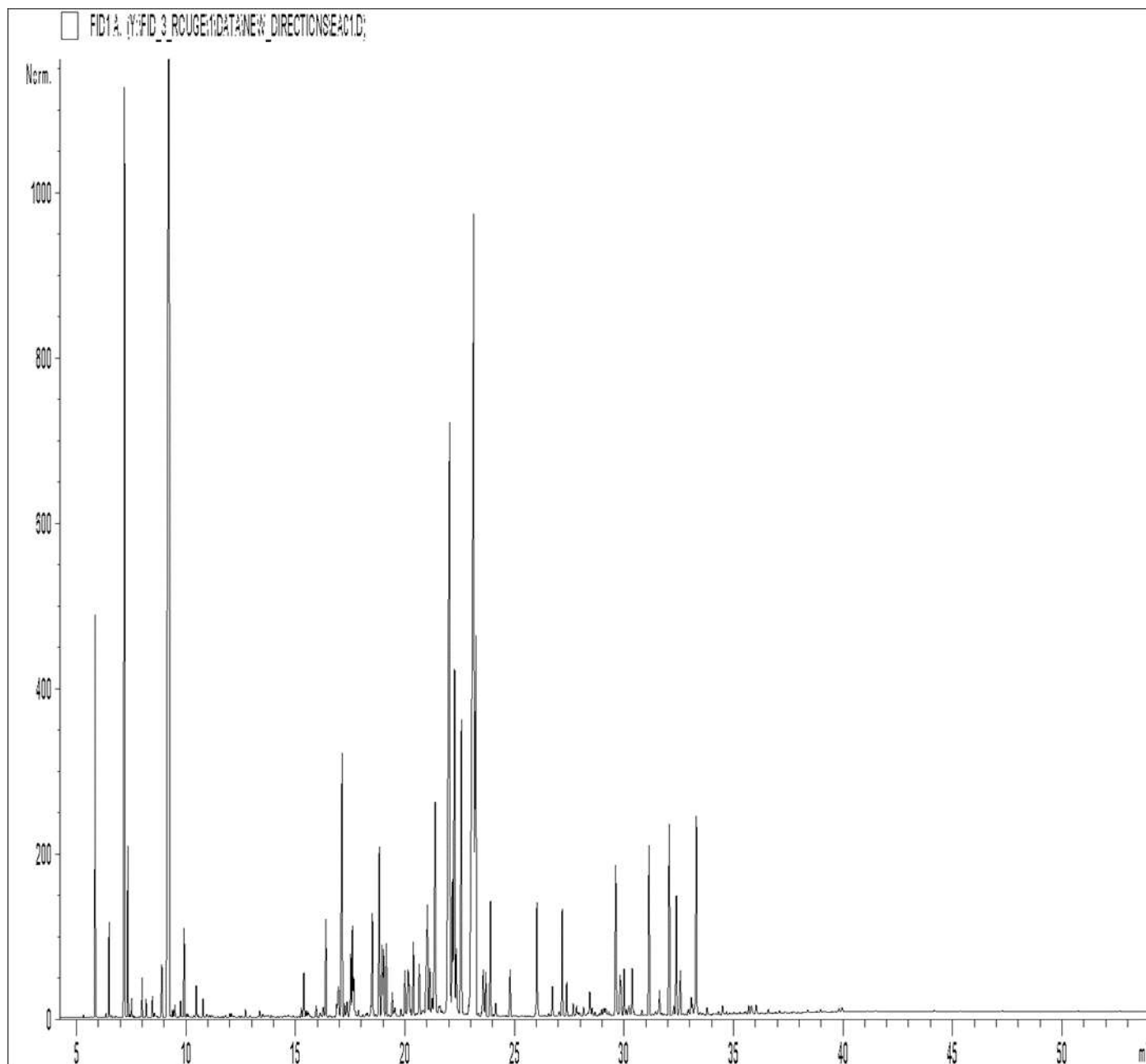


GCMS ANALYSIS

PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218

DATE: March 12, 2021



*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: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218

Peak	RT (min)	Compound name	%
1	5,32	TRICYCLENE	0,01
2	5,80	alpha-PINENE	1,76
3	5,85	alpha-THUYENE	0,10
4	6,35	alpha-FENCHENE	0,02
5	6,48	CAMPHENE	0,47
6	6,60	HEXANAL	0,01
7	6,80	METHYL 2-METHYLPENTANOATE	0,01
8	7,19	<b>beta-PINENE</b>	<b>6,36</b>
9	7,34	SABINENE	0,83
10	7,43	PINADIENE	0,02
11	7,52	delta2-CARENE	0,10
12	7,99	beta-MYRCENE	0,21
13	8,18	alpha-PHELLANDRENE	0,11
14	8,47	alpha-TERPINENE	0,13
15	8,58	METHYL 2-METHYLHEXANOATE	0,04
16	8,69	LIMONENE	0,46
17	9,23	1,8-CINEOLE	<b>18,11</b>
18		<b>beta-PHELLANDRENE</b>	
19	9,37	FURAN, 2-PENTYL-	0,04
20	9,44	BUTYL BUTYRATE	0,04
21	9,50	METHYL HEXANOATE	0,07
22	9,76	cis-beta-OCIMENE	0,09
23	9,80	2,4-DIMETHYL-HEXANOATE METHYL ESTER	0,20
24		gamma-TERPINENE	
25	9,92	trans-beta-OCIMENE	0,39
26	10,02	4-METHYLPENTANOATE METHYL	0,02
27	10,09	2-ETHYLHEXANOATE METHYL	0,02
28	10,37	m-CYMENE	0,01
29	10,47	p-CYMENE	0,18
30	10,55	ALIPHATIC ESTER	0,02

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218

Peak	RT (min)	Compound name	%
31	10,78	TERPINOLENE	0,11
32	10,95	ISOAMYL ISOVALERATE	0,03
33	11,08	AMYL VALERATE	0,02
34	11,16	TERPENIC ESTER	0,02
35	11,24	1,3,7-NONATRIENE, 4,8-DIMETHYL-	0,01
36	11,81	4-NONANONE	0,02
37	12,01	6-METHYL-5-HEPTEN-2-ONE	0,02
38	12,08	1-HEXANOL	0,03
39	12,42	TERPENIC ESTER	0,01
40	12,72	COMPOUND Mw=156	0,05
41	12,92	TERPENIC ALCOHOL	0,02
42	13,36	2-METHYLBUTYL ANGELATE	0,05
43	13,52	ISOAMYL ANGELATE	0,03
44	13,64	NONANAL	0,03
45	13,76	o-METHYLANISOLE	0,02
46	13,89	ALIPHATIC ESTER	0,02
47	14,54	TETRADECANE	0,02
48	14,67	alpha,p-DIMETHYLSTYRENE	0,03
49	14,90	MENTHATRIENE ISOMER	0,01
50	15,27	trans-THUYANOL	0,06
51	15,39	alpha-CUBEBENE	0,33
52	15,49	ISOAMYL TIGLATE	0,05
53	15,56	ALIPHATIC ESTER Mw=184	0,04
54	15,61	ALIPHATIC ESTER ISOMER Mw=184	0,03
55	15,95	BICYCLOELEMENE	0,08
56	16,12	CYCLOSATIVENE + ISOLEDENE	0,05
57	16,28	YLANGENE	0,10
58	16,39	alpha-COPAENE	0,74
59	16,88	COMPOUND Mw=152	0,09
60	16,93	CAMPHOR	0,17

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218

Peak	RT (min)	Compound name	%
61	16,98	alpha-BOURBONENE	0,22
62	17,13	<b>beta-BOURBONENE</b>	<b>2,52</b>
63	17,25	alpha-GURJUNENE	0,09
64	17,36	LINALOOL	0,15
65	17,45	cis-THUYANOL	0,05
66	17,52	cis-p-MENTH-3-EN-7-AL	0,45
67	17,61	trans-p-MENTH-3-EN-7-AL	0,72
68	17,68	beta1-CUBEBENE	0,29
69	17,72	LINALYL ACETATE	0,05
70	17,87	Trans-p-MENTH-2-EN-1-OL	0,06
71	18,22	PINOCARVONE	0,03
72	18,28	METHYL THYMOL ETHER	0,04
73	18,45	ELEMENE ISOMER	0,10
74	18,50	BORNYL ACETATE	0,47
75	18,55	epsilon-CADINENE	0,40
76	18,83	beta-ELEMENE	1,42
77	18,95	beta-CUBEBENE	0,52
78	19,02	beta-CARYOPHYLLENE	0,64
79	19,15	TERPINENE-4-OL	0,60
80	19,26	SELINENE ISOMER	0,03
81	19,42	AROMADENDRENE	0,19
82	19,49	MYRTENAL	0,05
83	19,55	CADINADIENE ISOMER	0,08
84	19,82	cis-p-MENTH-2-EN-1-OL	0,08
85	20,00	CADINA-3,5-DIENE	0,41
86	20,13	GERMACRENE A	0,48
87	20,19	SESQUITERPENE	0,22
88	20,26	CADINADIENE ISOMER	0,08
89	20,38	ALLO-AROMADENDRENE	0,63
90	20,65	ZONARENE	0,55

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218

Peak	RT (min)	Compound name	%
91	20,85	CRYPTONE	0,14
92	20,99	alpha-HUMULENE	0,51
93	21,03	cis-4,5-MUUROLADIENE	0,98
94	21,14	CARVOTANACETONE + gamma-SELINENE	0,45
95	21,25	4,5-di-epi-ARISTOLOCHENE	0,19
96	21,38	<b>gamma-MUUROLENE</b>	<b>2,51</b>
97		BORNEOL	
98	21,53	alpha-TERPINEOL	0,11
99	21,59	LEDENE	0,13
100	21,69	SESQUITERPENE Mw=202	0,10
101	22,04	<b>GERMACRENE D</b>	<b>9,11</b>
102	22,08	MUUROLENE ISOMER	0,12
103	22,17	MUUROLADIENE ISOMER + beta-SELINENE	1,04
104	22,26	<b>alpha-MUUROLENE</b>	<b>3,33</b>
105	22,35	alpha-SELINENE	0,69
106	22,58	<b>BICYCLOGERMACRENE</b>	<b>3,03</b>
107	22,89	alpha-FARNESENE	0,10
108	23,14	<b>delta-CADINENE</b>	<b>12,65</b>
109	23,24	<b>gamma-CADINENE</b>	<b>4,32</b>
110	23,34	SESQUITERPENE	0,05
111	23,47	CUMINAL	0,04
112	23,57	AROMATIC COMPOUND Mw=222	0,53
113	23,68	CADINA-1,4-DIENE	0,34
114	23,90	alpha-AMORPHENE	0,92
115	24,14	2-PHENYLETHYL ACETATE	0,13
116	24,75	cis-CALAMENENE	0,15
117	24,80	trans-CALAMENENE	0,26
118	25,08	KETONE E-GERANYL	0,02
119	26,02	epi-CUBEBOL	0,89
120	26,06	SABINOL ISOMER	0,06

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218

Peak	RT (min)	Compound name	%
121	26,55	SESQUITERPENIC EPOXIDE	0,03
122	26,73	alpha-CALACORENE	0,25
123	27,05	CHRYSANTHEMOL ISOMER	0,06
124	27,18	CUBEBOL	0,84
125	27,38	SESQUITERPENOL	0,26
126	27,68	beta-CALACORENE	0,10
127	27,83	SESQUITERPENIC EPOXIDE	0,10
128	27,89	ISOCARYOPHYLLENE EPOXIDE	0,03
129	27,96	CUBEBOL ISOMER	0,06
130	28,15	CARYOPHYLLENE OXIDE	0,09
131	28,37	SESQUITERPENOL	0,06
132	28,44	CUBEBOL ISOMER	0,24
133	28,55	CHRYSANTHEMOL ISOMER	0,08
134	28,68	SESQUITERPENOL	0,04
135	28,88	ALIPHATIC ESTER	0,03
136	28,98	AROMATIC COMPOUND Mw=222	0,06
137	29,08	LEDOL	0,08
138	29,16	HEXADECANAL	0,10
139	29,30	epoxy-6,7-HUMULENE	0,04
140	29,62	GERMACRENE D-4-OL	1,28
141	29,65	CUBEBOL ISOMER	0,15
142	29,80	epi-CUBENOL	0,32
143	29,85	SESQUITERPENOL	0,21
144	30,00	CUBENOL	0,37
145	30,10	SESQUITERPENOL	0,06
146	30,22	GLOBULOL	0,13
147	30,38	VIRIDIFLOROL	0,41
148	30,45	CUMINOL	0,03
149	30,81	SESQUITERPENOL	0,05
150	31,14	SPATHULENOL	1,41

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218

Peak	RT (min)	Compound name	%
151	31,44	SESQUITERPENIC EPOXIDE	0,05
152	31,62	SESQUITERPENOL Mw=222	0,27
153	32,06	T-CADINOL	1,61
154	32,28	SESQUITERPENOL	0,10
155	32,39	alpha-MUUROLOL	0,98
156	32,57	delta-CADINOL	0,39
157	32,94	SESQUITERPENIC EPOXIDE	0,07
158	33,06	CADALENE	0,16
159	33,12	CEMBRENE	0,08
160	33,20	alpha-NOOTKATOL	0,06
161	33,30	alpha-CADINOL	1,67
162	33,46	SESQUITERPENIC EPOXIDE	0,04
163	33,79	EUDESMA-7(11)-EN-4-OL	0,08
164	34,31	AROMATIC COMPOUND	0,03
165	34,49	SESQUITERPENIC EPOXIDE	0,08
166	34,68	SESQUITERPENOL Mw=220	0,03
167	35,03	SESQUITERPENIC EPOXIDE	0,03
168	35,28	SESQUITERPENIC EPOXIDE	0,02
169	35,55	SESQUITERPENOL	0,04
170	35,69	AROMATIC COMPOUND	0,08
171	35,82	SESQUITERPENIC EPOXIDE	0,11
172	36,04	AROMATIC COMPOUND Mw=200	0,09
173	36,59	SESQUITERPENOL Mw=220	0,04
174	37,10	SESQUITERPENIC EPOXIDE	0,04
175	37,36	SESQUITERPENOL Mw=220	0,02
176	38,39	AROMATIC COMPOUND	0,03
177	38,98	10-HYDROXYOPOPLANONE	0,03
178	39,82	SESQUITERPENIC EPOXIDE	0,04
179	39,96	SESQUITERPENIC EPOXIDE	0,06
		<b>TOTAL</b>	<b>99,94</b>

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