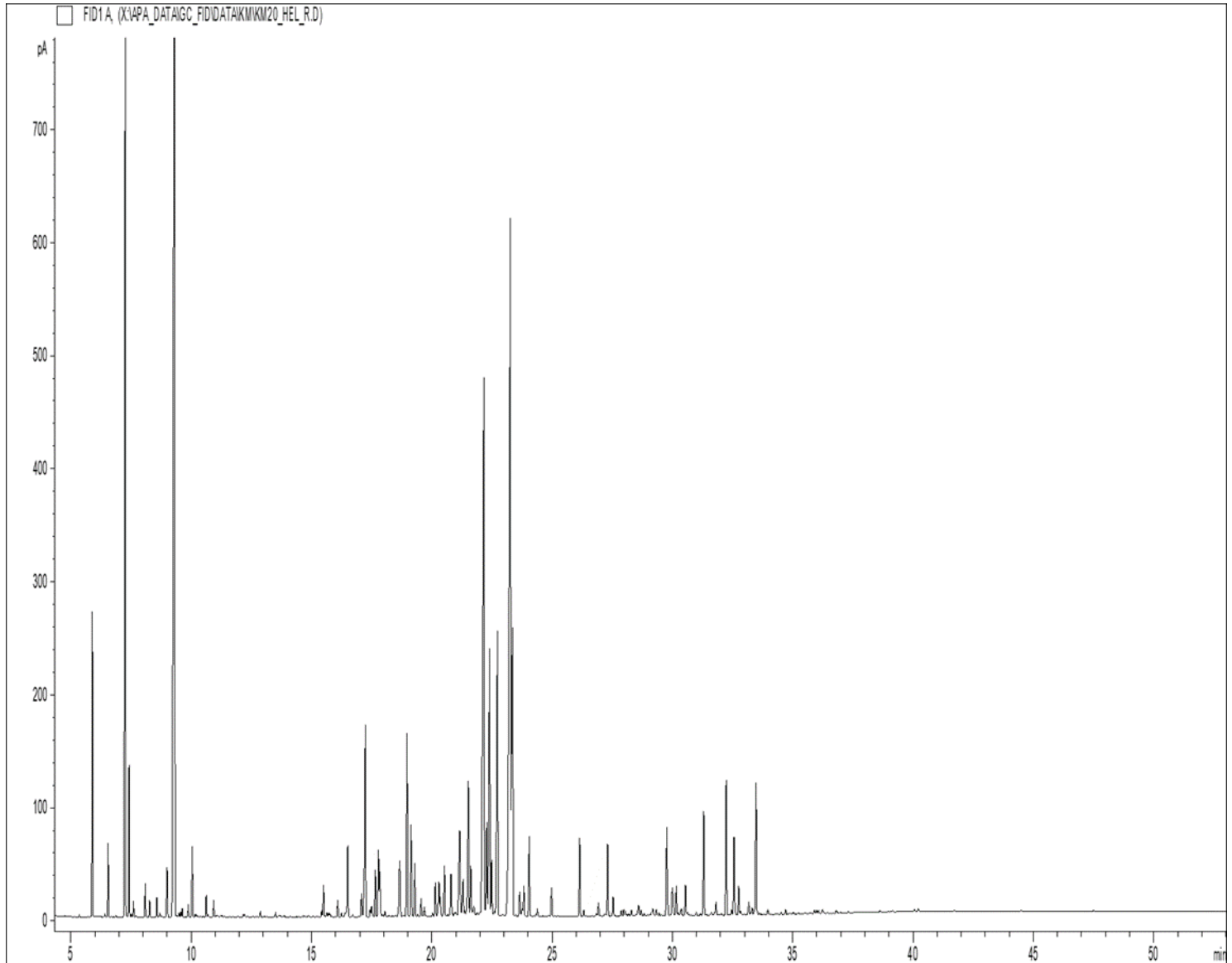


GCMS ANALYSIS

PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218

DATE: September 14, 2023



*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	5,36	BORNYLENE	0,02
2	5,89	alpha-PINENE	2,16
3	5,90	alpha-THUYENE	0,07
4	6,41	alpha-FENCHENE	0,03
5	6,55	CAMPHENE	0,54
6	6,88	ALIPHATIC ESTER	0,01
7	7,26	<b>beta-PINENE</b>	<b>8,07</b>
8	7,42	SABINENE	1,08
9	7,52	ALIPHATIC ESTER	0,02
10	7,61	TERPENE ISOMER	0,11
11	7,71	ALIPHATIC ESTER	0,01
12	8,09	beta-MYRCENE	0,25
13	8,28	alpha-PHELLANDRENE	0,13
14	8,58	alpha-TERPINENE	0,16
15	8,70	ALIPHATIC ESTER	0,04
16	8,78	ALIPHATIC ESTER	0,01
17	9,00	LIMONENE	0,52
18	9,31	<b>1,8-CINEOLE</b>	<b>19,93</b>
19	17,92	<b>beta-PHELLANDRENE</b>	0,26
20	9,40	TERPENE ISOMER	0,02
21	9,49	ALIPHATIC ESTER	0,04
22	9,56	ALIPHATIC ESTER	0,05
23	9,62	cis-beta-OCIMENE	0,07
24	9,88	METHYL 2,4-DIMETHYL CAPROATE	0,09
25	10,00	gamma-TERPINENE	0,13
26	10,05	trans-beta-OCIMENE	0,51
27	10,15	4-METHYLPENTANOATE, METHYL ESTER	0,02
28	10,21	2-ETHYLHEXANOATE, METHYL ESTER	0,03
29	10,62	p-CYMENE	0,17
30	10,70	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	10,93	TERPINOLENE	0,13
32	11,06	ISOAMYL ISOVALERATE	0,03
33	11,22	ALIPHATIC ESTER	0,02
34	11,28	ALIPHATIC ESTER	0,01
35	11,95	ALIPHATIC ESTER	0,01
36	12,17	6-METHYL-5-HEPTEN-2-ONE	0,02
37	12,22	ALIPHATIC ESTER	0,02
38	12,56	ALIPHATIC COMPOUND	0,01
39	12,88	COMPOUND Mw=156	0,05
40	13,51	2-METHYLBUTYL ANGELATE	0,04
41	13,68	ALIPHATIC ESTER	0,04
42	13,88	ALKAN COMPOUND	0,02
43	14,12	o-METHYLANISOLE	0,02
44	14,68	COMPOUND Mw=134	0,02
45	14,87	COMPOUND Mw=132	0,02
46	15,42	trans-THUYANOL	0,06
47	15,50	alpha-CUBEBENE	0,31
48	15,64	ALIPHATIC ESTER	0,05
49	15,72	ALIPHATIC ESTER	0,04
50	15,76	SESQUITERPENE	0,03
51	16,09	ELEMENE ISOMER	0,16
52	16,24	YLANGENE	0,05
53	16,40	SESQUITERPENE	0,04
54	16,51	alpha-COPAENE	0,74
55	17,08	CAMPHOR	0,13
56	17,08	alpha-BOURBONENE	0,13
57	17,24	beta-BOURBONENE	2,28
58	17,44	LINALOOL	0,07
59	17,50	alpha-GURJUNENE	0,13
60	17,65	beta1-CUBEBENE	0,45

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**GCMS ANALYSIS (cont'd,)**

**PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218**

Peak	RT (min)	Compound name	%
61	17,78	cis-p-MENTH-3-EN-7-AL	0,71
62	17,84	trans-p-MENTH-3-EN-7-AL	0,48
63	18,05	trans-p-MENTH-2-EN-1-OL	0,07
64	18,22	TERPENIC COMPOUND	0,02
65	18,38	TERPENIC COMPOUND	0,02
66	18,49	ALIPHATIC ESTER	0,02
67	18,66	epsilon-CADINENE	0,86
68	44,34	BORNYL ACETATE	0,45
69	18,81	SESQUITERPENE	0,02
70	18,97	beta-ELEMENE	1,88
71	19,14	beta-CUBEBENE	1,03
72	19,29	beta-CARYOPHYLLENE	0,55
73	19,41	SESQUITERPENE	0,03
74	19,56	AROMADENDRENE	0,19
75	19,69	SESQUITERPENE	0,10
76	19,75	MYRTENAL	0,01
77	19,83	SESQUITERPENE	0,01
78	20,03	TERPENIC COMPOUND	0,05
79	20,14	SESQUITERPENE	0,37
80	20,29	CADINA-3,5-DIENE	0,42
81	20,35	GERMACRENE A	0,20
82	20,53	ALLO-AROMADENDRENE	0,58
83	20,67	SESQUITERPENE	0,03
84	20,81	ZONARENE	0,52
85	20,99	CRYPTONE	0,10
86	21,16	alpha-HUMULENE	1,39
87		cis-4,5-MUUROLADIENE	
88	21,30	CARVOTANACETONE	0,48
89	21,38	4,5-di-epi-ARISTOLOCHENE	0,07
90	21,52	gamma-MUUROLENE	1,79

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) – 11218

Peak	RT (min)	Compound name	%
91	21,62	BORNEOL	0,58
92	21,74	SESQUITERPENE	0,20
93	21,89	SESQUITERPENE	0,08
94	22,00	SESQUITERPENE	0,06
95	22,17	<b>GERMACRENE D</b>	<b>9,14</b>
96	22,30	MUUROLENE ISOMER	1,05
97	22,40	<b>alpha-MUUROLENE</b>	<b>3,09</b>
98	52,38	beta-SELINENE	0,04
99	22,49	alpha-SELINENE	0,61
100	22,61	SESQUITERPENE	0,07
101	22,73	<b>BICYCLOGERMACRENE</b>	<b>3,55</b>
102	22,82	SESQUITERPENE	0,03
103	22,95	TERPENIC COMPOUND	0,04
104	23,26	<b>delta-CADINENE</b>	<b>10,52</b>
105	23,36	<b>gamma-CADINENE</b>	<b>5,49</b>
106	23,49	SESQUITERPENE	0,04
107	23,66	AROMATIC COMPOUND Mw=222	0,31
108	23,76	SESQUITERPENE	0,11
109	23,83	CADINA-1,4-DIENE	0,32
110	24,05	alpha-AMORPHENE	0,81
111	24,25	2,4-DECADIENAL	0,01
112	24,39	2-PHENYLETHYL ACETATE	0,09
113	24,87	cis-CALAMENENE	0,01
114	24,98	trans-CALAMENENE	0,32
115	26,15	Epi-CUBEBOL	0,79
116	26,32	SABINOL ISOMER	0,07
117	26,85	COMPOUND Mw=220	0,04
118	26,93	alpha-CALACORENE	0,16
119	27,19	AROMATIC COMPOUND	0,04
120	27,31	CUBEBOL	0,74

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218

Peak	RT (min)	Compound name	%
121	27,54	SESQUITERPENOL	0,19
122	27,88	COMPOUND Mw=200	0,07
123	27,98	SESQUITERPENOL	0,07
124	28,06	SESQUITERPENOL	0,06
125	28,19	AROMATIC COMPOUND	0,03
126	28,30	SESQUITERPENOL	0,08
127	28,49	AROMATIC COMPOUND	0,02
128	28,59	SESQUITERPENIC OXIDE	0,17
129	28,71	SESQUITERPENIC COMPOUND	0,07
130	28,83	SESQUITERPENIC COMPOUND	0,03
131	28,98	SESQUITERPENIC COMPOUND	0,01
132	29,06	SESQUITERPENIC COMPOUND	0,02
133	29,19	SESQUITERPENIC COMPOUND	0,14
134	29,34	AROMATIC COMPOUND	0,08
135	29,45	SESQUITERPENOL	0,03
136	29,54	SESQUITERPENIC COMPOUND	0,01
137	29,65	SESQUITERPENIC COMPOUND	0,01
138	29,77	GERMACRENE D-4-OL	1,05
139	30,00	Epi-CUBENOL	0,47
140	30,17	CUBENOL	0,31
141	30,24	SESQUITERPENOL	0,03
142	30,37	SESQUITERPENOL	0,11
143	30,54	VIRIDIFLOROL	0,33
144	30,63	SESQUITERPENOL	0,05
145	31,00	AROMATIC COMPOUND	0,04
146	31,17	EUDESMOL ISOMER	0,02
147	31,31	SPATHULENOL	1,10
148	31,41	SESQUITERPENOL	0,01
149	31,63	COMPOUND Mw=220	0,05
150	31,82	COMPOUND Mw=220	0,18

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**GCMS ANALYSIS (cont'd.)**

**PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218**

Peak	RT (min)	Compound name	%
151	31,93	EUGENOL	0,01
152	32,03	AROMATIC COMPOUND	0,02
153	32,24	T-CADINOL	1,40
154	32,46	SESQUITERPENOL	0,07
155	32,56	alpha-MUUROLOL	0,84
156	32,76	delta-CADINOL	0,30
157	32,83	SESQUITERPENOL	0,05
158	32,97	SESQUITERPENOL	0,01
159	33,18	DITERPENE	0,16
160	33,26	COMPOUND Mw=220	0,02
161	33,32	AROMATIC COMPOUND	0,08
162	33,48	alpha-CADINOL	1,47
163	33,61	SESQUITERPENIC COMPOUND	0,02
164	33,80	COMPOUND Mw=220	0,02
165	33,97	EUDESMA-7(11)-EN-4-OL	0,07
166	34,39	SESQUITERPENIC COMPOUND	0,02
167	34,52	COMPOUND Mw=220	0,02
168	34,70	COMPOUND Mw=220	0,06
169	34,89	COMPOUND Mw=220	0,02
170	35,02	COMPOUND Mw=220	0,03
171	35,23	COMPOUND Mw=220	0,03
172	35,50	AROMATIC COMPOUND	0,02
173	35,54	AROMATIC COMPOUND	0,01
174	35,70	COMPOUND Mw=220	0,03
175	35,76	AROMATIC COMPOUND	0,02
176	35,91	SESQUITERPENIC COMPOUND	0,06
177	36,00	SESQUITERPENIC COMPOUND	0,05
178	36,08	COMPOUND Mw=220	0,05
179	36,25	COMPOUND Mw=220	0,08
180	36,34	AROMATIC COMPOUND	0,01

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GCMS ANALYSIS (cont'd,)

PRODUCT NAME: HELICHRYSUM ESSENTIAL OIL (AFRICA) - 11218

Peak	RT (min)	Compound name	%
181	36,45	AROMATIC COMPOUND	0,02
182	36,81	SESQUITERPENIC COMPOUND	0,04
183	36,99	SESQUITERPENIC COMPOUND	0,02
184	37,31	AROMATIC COMPOUND	0,02
185	37,57	COMPOUND Mw=220	0,02
186	37,88	SESQUITERPENIC OXIDE	0,01
187	38,63	COMPOUND Mw=220	0,03
188	39,15	AROMATIC COMPOUND	0,02
189	40,06	COMPOUND Mw=220	0,03
190	40,21	COMPOUND Mw=220	0,04
191	41,70	TERPENIC COMPOUND	0,01
192	44,50	AROMATIC COMPOUND	0,01
		<b>TOTAL</b>	<b>99,96</b>

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