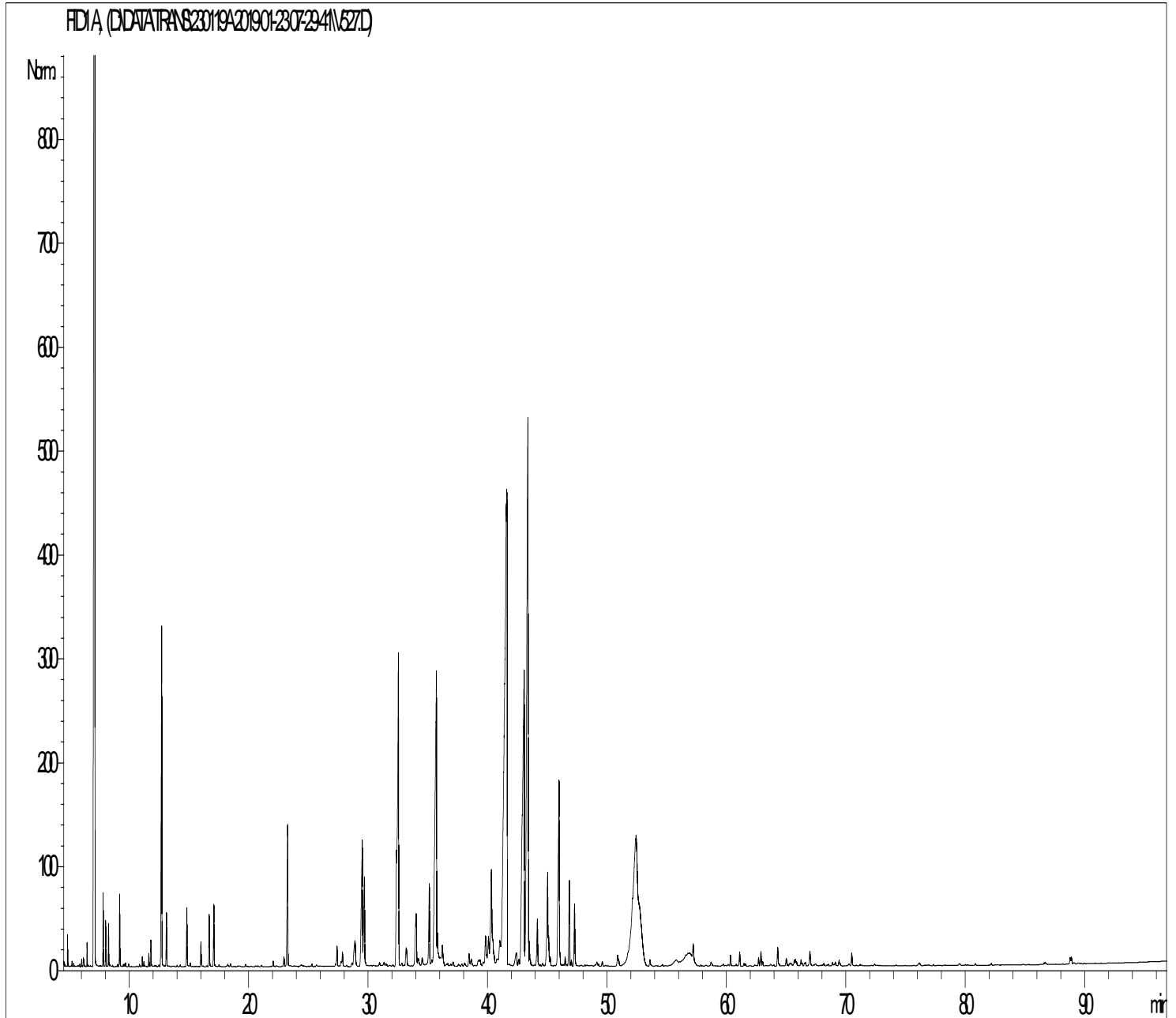


GCMS ANALYSIS

PRODUCT NAME: HELICHRYSUM (SLOVENIA) ESSENTIAL OIL - 11068

DATE: January 24, 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: HELICHRYSUM (SLOVENIA) ESSENTIAL OIL - 11068

Peak	RT (min)	Compound name	%
1	4,5	OCTANE	0,02
2	4,6	ACETONE	0,01
3	4,8	2-HEPTENE,2-METHYL-	0,10
4	5,2	NONANE	0,02
5	5,3	ALIPHATIC ESTER	0,01
6	5,8	ALIPHATIC ALCOHOL	0,01
7	6,0	ALIPHATIC ESTER	0,03
8	6,1	3-PENTANONE	0,03
9	6,2	BORNYLENE	0,03
10	6,5	2-METHYL-3-PENTANONE	0,10
11	7,1	<b>alpha-PINENE</b>	<b>24,47</b>
12	7,8	alpha-FENCHENE	0,30
13	8,0	CAMPHENE	0,20
14	8,2	4-METHYL-3-HEXANONE	0,20
15	8,4	HEXANAL	0,01
16	9,0	ALIPHATIC ESTER	0,01
17	9,1	beta-PINENE	0,34
18	9,5	ISOAMYL ACETATE	0,01
19	9,6	PINADIENE	0,01
20	9,7	THUYADIENE	0,02
21	9,9	delta2-CARENE	0,01
22	10,8	delta3-CARENE	0,01
23	11,0	beta-MYRCENE	0,05
24	11,2	alpha-PHELLANDRENE	0,03
25	11,6	ISOBUTYL-2-METHYLBUTYRATE	0,07
26	11,8	alpha-TERPINENE	0,15
27	12,5	2-METHYL-2-METHYLBUTYRATE	0,01
28	12,7	<b>LIMONENE</b>	<b>2,45</b>
29	13,1	1,8-CINEOLE	0,32
30	13,9	FURAN, 2-PENTYL	0,01

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM (SLOVENIA) ESSENTIAL OIL - 11068

Peak	RT (min)	Compound name	%
31	14,2	Cis-beta-OCIMENE	0,01
32	14,8	gamma-TERPINENE	0,36
33	15,1	Trans-beta-OCIMENE	0,03
34	16,0	p-CYMENE	0,16
35	16,5	2-METHYLBUTYL-2-METHYLBUTYRATE	0,01
36	16,7	TERPINOLENE	0,34
37	17,0	ISOBUTYL ANGELATE	0,41
38	17,5	AMYL VALERATE	0,01
39	18,2	ALIPHATIC ESTER	0,02
40	18,5	3-HEXEN-1-OL ACETATE	0,02
41	19,7	6-METHYL-5-HEPTEN-2-ONE	0,01
42	21,1	ALIPHATIC ESTER	0,01
43	22,0	ALIPHATIC ESTER	0,04
44	22,9	2-NONANONE + ALKYL ANGELATE	0,07
45	23,2	ISOAMYL ANGELATE	1,22
46	24,4	TETRADECANE	0,02
47	25,3	ISOBUTYL, 2-METHYLBUTYRATE	0,02
48	25,7	METHYLPARACRESOL	0,02
49	27,3	HEXYL ANGELATE	0,15
50	27,7	NERYL OXIDE	0,05
51	27,8	ALIPHATIC KETONE	0,12
52	28,6	CYCLOSATIVENE	0,04
53	28,8	YLANGENE + SESQUITERPENE	0,45
54	29,5	alpha-COPAENE	1,60
55	29,7	ISOITALICENE	0,92
56	30,9	2-NONANOL	0,02
57	31,3	ALIPHATIC DIONE	0,13
58	31,5	alpha-GURJUNENE	0,02
59	32,1	BERGAMOTENE ISOMER	0,02
60	32,3	<b>ITALICENE</b>	<b>3,59</b>

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM (SLOVENIA) ESSENTIAL OIL - 11068

Peak	RT (min)	Compound name	%
61	32,4	LINALOOL	0,90
62	32,8	CEDRENE ISOMER	0,04
63	33,1	ITALICENE ISOMER	0,14
64	33,2	CEDRENE ISOMER	0,13
65	33,4	SESQUITERPENE	0,01
66	34,0	alpha-cis-BERGAMOTENE	0,77
67	34,2	ISOCARYOPHYLLENE	0,13
68	34,5	FENCHOL	0,08
69	34,6	3,5-DIMETHYLOCTANE-4,6-DIONE Mw=170	0,89
70	35,1	alpha-trans-BERGAMOTENE	0,71
71	35,3	2-UNDECANONE	0,02
72	35,7	<b>beta-CARYOPHYLLENE</b>	<b>4,82</b>
73	35,8	TERPINENE-4-OL	0,25
74	36,2	6,9-GUAIADIENE	0,18
75	36,5	SESQUITERPENE	0,03
76	36,6	ALIPHATIC ESTER	0,03
77	36,9	SESQUITERPENE	0,03
78	37,1	SESQUITERPENE	0,06
79	37,5	ALIPHATIC ESTER	0,03
80	37,8	beta-SANTENE	0,03
81	38,1	SESQUITERPENE	0,05
82	38,4	ALLO-AROMADENDRENE	0,15
83	38,6	Trans-PINOCARVEOL	0,10
84	39,2	SESQUITERPENE	0,10
85	39,3	ZONARENE	0,09
86	39,6	SESQUITERPENE	0,06
87	39,8	alpha-HUMULENE	0,43
88	40,1	E-beta-FARNESENE + CURCUMENE ISOMER	0,41
89	40,3	gamma-SELINENE	1,37
90	40,4	4,5-di-épi-ARISTOLOCHENE	0,38

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM (SLOVENIA) ESSENTIAL OIL - 11068

Peak	RT (min)	Compound name	%
91	40,8	Z-beta-FARNESENE	0,15
92	41,0	alpha-MUUROLENE	0,45
93	41,6	<b>gamma-CURCUMENE</b>	<b>13,69</b>
94	42,4	EREMOPHILENE	0,28
95	42,6	SESQUITERPENE	0,07
96	43,1	<b>beta-SELINENE</b>	<b>6,03</b>
97	43,3	<b>alpha-SELINENE</b>	<b>2,29</b>
98	43,4	<b>NERYL ACETATE</b>	<b>6,33</b>
99	43,5	beta-BISABOLENE	0,15
100	43,6	SESQUITERPENE Mw=202	0,06
101	44,1	beta-CURCUMENE	0,48
102	44,4	ALIPHATIC ESTER	0,01
103	44,6	ALIPHATIC ESTER	0,03
104	44,7	SESQUITERPENE	0,01
105	45,0	delta-CADINENE	1,00
106	45,1	gamma-CADINENE	0,23
107	45,2	7-épi-alpha-SELINENE	0,10
108	45,6	SESQUITERPENE	0,01
109	45,9	alpha-CURCUMENE	2,21
110	46,0	alpha-BISABOLENE	0,09
111	46,5	CADINA-1,4-DIENE	0,07
112	46,6	SESQUITERPENE	0,02
113	46,8	NERYL PROPIONATE	0,76
114	47,0	alpha-AMORPHENE	0,05
115	47,3	NEROL	0,55
116	48,1	2-PHENYLETHYL ACETATE	0,01
117	49,0	CALAMENENE ISOMER	0,02
118	49,1	CALAMENENE	0,04
119	49,3	AROMATIC COMPOUND	0,02
120	49,6	COMPOUND Mw=220	0,05

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM (SLOVENIA) ESSENTIAL OIL - 11068

Peak	RT (min)	Compound name	%
121	50,8	COMPOUND Mw=220	0,10
122	51,0	NERYL ISOBUTYRATE	0,07
123	52,4	<b>ITALIDIONE I Mw=210</b>	<b>7,04</b>
124	52,6	<b>ITALIDIONE II Mw=224</b>	<b>2,05</b>
125	53,5	alpha-CALACORENE	0,07
126	54,6	ALIPHATIC ESTER	0,02
127	55,8	ITALIDIONE ISOMER	0,30
128	56,0	<b>ITALIDIONE III Mw=238</b>	<b>1,31</b>
129	57,2	NERYL VALERATE	0,14
130	57,9	2-PHENYLETHYL ISOVALERATE	0,01
131	58,7	ALIPHATIC ESTER	0,05
132	59,7	ALIPHATIC ESTER	0,03
133	60,3	NEROLIDOL	0,08
134	60,8	CARYOPHYLLENOL	0,02
135	61,1	NERIC ESTER	0,12
136	61,4	Epi-CUBENOL	0,02
137	61,6	SESQUITERPENOL	0,02
138	62,3	ALIPHATIC ESTER	0,02
139	62,6	GUAJOL	0,07
140	62,8	COMPOUND Mw=235	0,12
141	63,0	TIGLATE DE 2-PHENYLETHYLE	0,03
142	63,2	EUDESMOL ISOMER	0,01
143	63,6	ALIPHATIC DIONE	0,02
144	63,9	ALIPHATIC ESTER	0,02
145	64,2	EUDESMA-5-EN-11-alpha-OL	0,17
146	64,4	ALIPHATIC ESTER	0,02
147	65,0	EUDESMOL ISOMERE	0,07
148	65,2	SESQUITERPENOL	0,03
149	65,4	ALIPHATIC ALCOHOL	0,03
150	65,6	AROMATIC COMPOUND	0,05

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM (SLOVENIA) ESSENTIAL OIL - 11068

Peak	RT (min)	Compound name	%
151	65,8	SESQUITERPENIC EPOXIDE	0,05
152	65,8	SESQUITERPENIC EPOXIDE	0,03
153	66,2	7-epi-beta-EUDESOL	0,05
154	66,4	AROMATIC COMPOUND	0,02
155	66,5	gamma-EUDESOL	0,02
156	66,6	T-CADINOL	0,03
157	67,0	LEVOJUNENOL	0,17
158	67,4	EUDESOL ISOMER	0,04
159	68,1	CADINOL ISOMER	0,03
160	68,4	SESQUITERPENOL	0,01
161	68,5	SESQUITERPENOL	0,02
162	68,8	Cis-alpha-BISABOLOL	0,03
163	69,0	alpha-BISABOLOL	0,01
164	69,1	alpha-EUDESOL	0,04
165	69,4	beta-EUDESOL	0,05
166	69,5	alpha-CADINOL	0,02
167	70,2	ALIPHATIC DIONE	0,03
168	70,5	EUDESMA-7-EN-4-OL	0,12
169	70,8	ALIPHATIC ESTER	0,01
170	71,2	COMPOSÉ CÉTONIQUE	0,01
171	71,4	ACIDE CAPRIQUE	0,01
172	72,4	CARYOPHYLLA-3,7-DIEN-6-OL	0,02
173	76,1	ALIPHATIC DIONE	0,05
174	76,9	BERGAMOTOL ISOMERE	0,01
175	77,3	COMPOSÉ AROMATIQUE	0,01
176	79,5	ALIPHATIC DIONE	0,03
177	80,8	ACIDE LAURIQUE	0,01
178	82,1	ESTER ALIPHATIQUE	0,02
179	86,6	ALIPHATIC DIONE	0,01
180	86,7	ALIPHATIC DIONE	0,02

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: HELICHRYSUM (SLOVENIA) ESSENTIAL OIL - 11068

Peak	RT (min)	Compound name	%
181	88,8	ALIPHATIC DIONE	0,06
182	88,9	ALIPHATIC DIONE	0,07
183	102,6	SQUALENE	0,05
		<b>TOTAL</b>	<b>99,88</b>

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