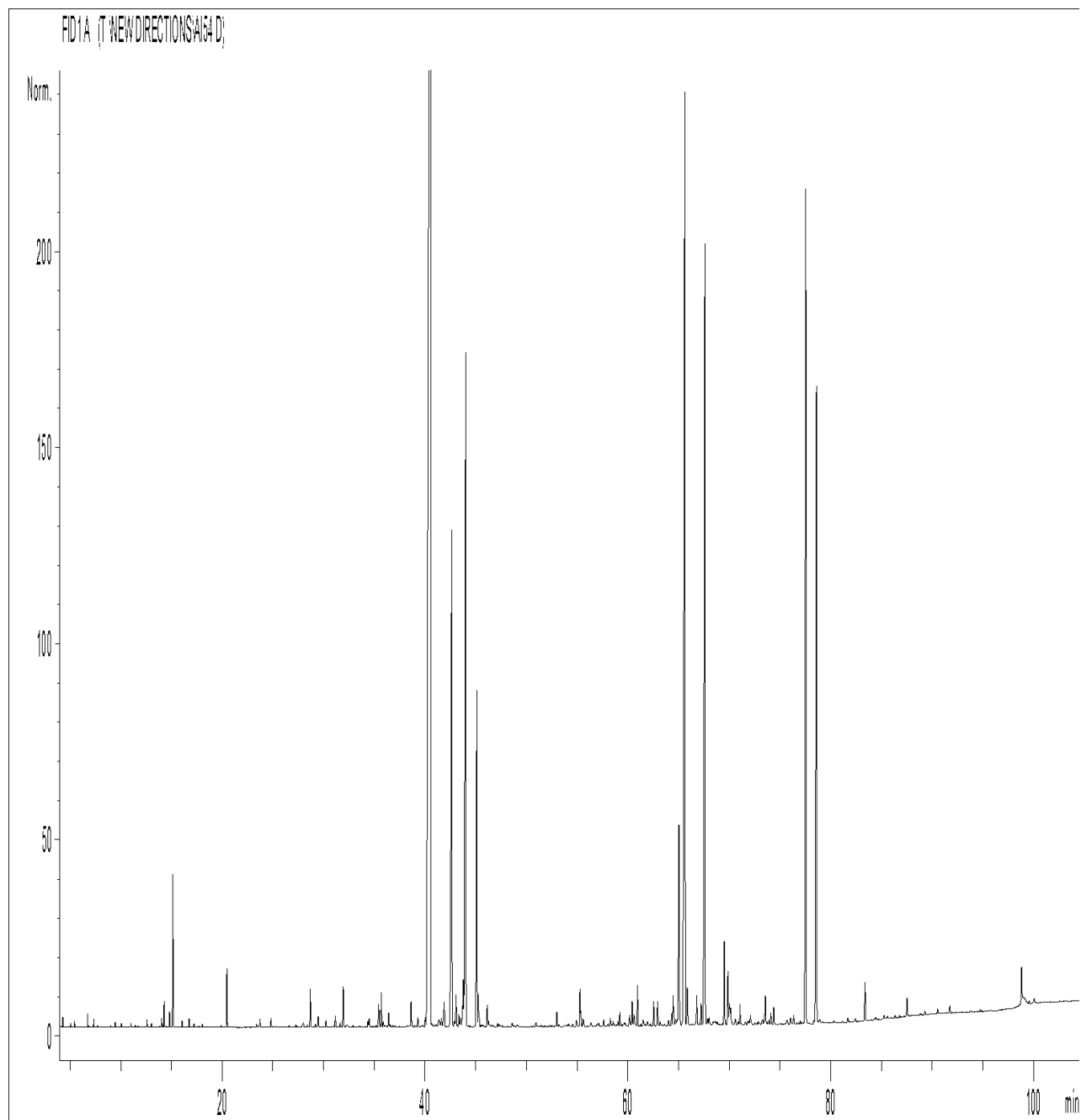


GCMS ANALYSIS

PRODUCT NAME: CHAMOMILE GERMAN ESSENTIAL OIL (BULGARIA) - 11331

DATE: January 28, 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: CHAMOMILE GERMAN ESSENTIAL OIL (BULGARIA) - 11331

Peak	RT (min)	Compound name	%
1	4,29	ACETONE	0,02
2	5,09	ISOVALERALDEHYDE	0,01
3	5,45	METHYL VINYL KETONE	0,02
4	6,75	alpha-PINENE	0,04
5	7,34	ETHYL 2-METHYLBUTYRATE	0,03
6	9,44	SABINENE	0,02
7	10,05	2-METHY-LPROPYL BUTYRATE	0,02
8	11,00	beta-MYRCENE	0,02
9	11,44	alpha-TERPINENE	0,01
10	12,58	LIMONENE	0,04
11	13,02	1,8-CINEOLE + beta-PHELLANDRENE	0,02
12	14,02	FURAN, 2-PENTYL-	0,05
13	14,15	ALIPHATIC ESTER	0,01
14	14,27	cis-beta-OCIMENE	0,13
15	14,80	gamma-TERPINENE	0,08
16	15,13	trans-beta-OCIMENE	0,75
17	16,05	p-CYMENE	0,04
18	16,73	TERPINOLENE	0,05
19	17,21	OCTANAL	0,02
20	18,03	TRIDECANE	0,02
21	19,88	5-HEPTEN-2-ONE, 6-METHYL-	0,01
22	20,47	ARTEMISIA KETONE	0,34
23	23,39	NONANAL	0,02
24	23,73	YOMOGI ALCOHOL	0,05
25	24,81	ARTEMISIA ALCOHOL	0,06
26	27,24	alpha-CUBEBENE	0,02
27	27,93	alpha-LONGIPINENE	0,02
28	27,99	SILPHINENE	0,04
29	28,39	AROMATIC COMPOUND Mw=174	0,02
30	28,69	BICYCLOELEMENE	0,26

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: CHAMOMILE GERMAN ESSENTIAL OIL (BULGARIA) - 11331

Peak	RT (min)	Compound name	%
31	29,21	3-HEXENYL ISOVALERATE	0,02
32	29,46	alpha-COPAENE	0,08
33	30,24	ARTEMISIA ALCOHOL ISOMER	0,04
34	31,01	beta-BOURBONENE	0,01
35	31,15	MODHEPHENE	0,09
36	31,63	alpha-GURJUNENE	0,03
37	31,93	alpha-ISOCOMENE	0,28
38	32,23	2-NONENAL	0,01
39	32,31	beta1-CUBEBENE	0,03
40	32,89	LINALOOL	0,01
41	33,59	1-OCTANOL	0,01
42	34,36	epsilon-CADINENE	0,04
43	34,49	beta-ISOCOMENE	0,06
44	35,18	alpha-trans-BERGAMOTENE	0,01
45	35,42	beta-CUBEBENE	0,16
46	35,48	beta-ELEMENE	0,03
47	35,69	beta-CARYOPHYLLENE	0,25
48	35,89	SELINADIENE ISOMER	0,05
49	36,04	TERPINENE-4-OL	0,01
50	36,18	SESQUITERPENE	0,01
51	36,41	AROMADENDRENE	0,11
52	36,55	LAVANDULYL ACETATE	0,02
53	36,84	COPACAMPHENE	0,02
54	37,05	THUJOPSENE	0,02
55	38,20	PREZIZA-7-ENE ISOMER	0,01
56	38,45	GERMACRENE A	0,01
57	38,63	ALLO-AROMADENDRENE	0,20
58	39,28	3,7-NONADIEN-2-ONE, 4,8-DIMETHYL-	0,08
59	39,68	ZONARENE	0,01
60	39,77	1-NONANOL	0,01

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: CHAMOMILE GERMAN ESSENTIAL OIL (BULGARIA) - 11331

Peak	RT (min)	Compound name	%
61	40,02	alpha-HUMULENE	0,08
62	40,57	E-beta-FARNESENE	39,30
63	41,34	Z-beta-FARNESENE	0,05
64	41,38	gamma-MUUROLENE	0,08
65	41,61	gamma-CURCUMENE	0,08
66	41,81	CALAMENENE ISOMER	0,04
67	41,89	LEDENE	0,21
68	42,63	GERMACRENE D	4,89
69	42,71	MUUROLADIENE ISOMER	0,01
70	42,88	beta-SELINENE	0,05
71	43,06	AROMATIC COMPOUND	0,24
72	43,19	SESQUITERPENE	0,01
73	43,35	alpha-ZINGIBERENE	0,09
74	43,54	alpha-MUUROLENE	0,08
75	43,68	Z,E-alpha-FARNESENE	0,12
76	43,77	beta-BISABOLENE	0,31
77	44,00	BICYCLOGERMACRENE	6,29
78	44,28	COMPOUND Mw=172	0,01
79	45,10	E,E-alpha-FARNESENE	2,56
80	45,25	delta-CADINENE	0,23
81	45,33	SELINADIENE ISOMER	0,06
82	45,51	SESQUITERPENE Mw=202	0,01
83	45,64	METHYL SALICYLATE	0,02
84	46,13	beta-SESQUIPHELLANDRENE	0,15
85	46,26	alpha-CURCUMENE	0,04
86	46,37	trans-alpha-BISABOLENE	0,01
87	46,56	CADINA-1,4-DIENE	0,01
88	47,15	SESQUITERPENE Mw=202	0,02
89	47,30	AROMATIC COMPOUND Mw=200	0,01
90	47,32	alpha-AMORPHENE	0,01

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: CHAMOMILE GERMAN ESSENTIAL OIL (BULGARIA) - 11331

Peak	RT (min)	Compound name	%
91	48,58	2,4-DECADIENAL	0,04
92	49,11	beta-DAMASCENONE	0,02
93	50,94	GERANIOL	0,03
94	52,29	AROMATIC COMPOUND	0,02
95	52,99	SESQUIROSEFURAN Mw=218	0,10
96	53,22	AROMATIC COMPOUND	0,02
97	54,01	DIHYDROCHAMAZULEN	0,01
98	54,16	SESQUITERPENIC EPOXIDE	0,02
99	54,55	GERANYL BUTYRATE	0,02
100	54,94	PALUSTROL	0,05
101	54,99	beta-IONONE	0,02
102	55,27	DENDROLASIN Mw=218	0,26
103	55,36	SESQUITERPENIC EPOXIDE	0,09
104	55,59	SESQUITERPENIC EPOXIDE	0,05
105	55,63	TERPENIC ESTER	0,02
106	56,35	SESQUITERPENIC EPOXIDE	0,03
107	56,93	ISOCARYOPHYLLENE OXIDE	0,02
108	57,11	AROMATIC COMPOUND	0,03
109	57,62	CARYOPHYLLENE OXIDE	0,05
110	58,26	SESQUITERPENIC EPOXIDE	0,06
111	58,54	SESQUITERPENOL	0,04
112	58,66	DEHYDRO-beta-IONONE	0,02
113	59,02	CHRYSANTHEMOL ISOMER	0,04
114	59,21	COMPOUND Mw=152	0,10
115	59,37	METHYLEUGENOL	0,01
116	59,57	SESQUITERPENIC EPOXIDE	0,02
117	59,64	AROMATIC COMPOUND	0,02
118	59,73	AROMATIC COMPOUND	0,02
119	60,12	SESQUITERPENOL	0,02
120	60,18	LEDOL	0,09

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: CHAMOMILE GERMAN ESSENTIAL OIL (BULGARIA) - 11331

Peak	RT (min)	Compound name	%
121	60,42	SESQUITERPENIC EPOXY ACETATE Mw=178	0,20
122	60,60	PENTADECANAL	0,14
123	60,94	NEROLIDOL	0,28
124	61,28	GERMACRENE D-4-OL	0,02
125	61,51	GLEENOL	0,07
126	61,66	Epi-CUBENOL	0,02
127	61,93	CUBENOL	0,05
128	62,20	ALIPHATIC ALCOHOL	0,02
129	62,54	GLOBULOL	0,19
130	62,93	VIRIDIFLOROL	0,19
131	63,20	SESQUITERPENIC EPOXIDE	0,03
132	64,03	10-epi-gamma-EUDESMOL	0,05
133	64,32	SESQUITERPENOL	0,08
134	64,46	ALIPHATIC ESTER	0,21
135	64,51	SESQUITERPENIC EPOXIDE	0,07
136	64,72	ALIPHATIC ESTER	0,06
137	64,86	SESQUITERPENIC EPOXIDE	0,04
138	65,03	SPATHULENOL	1,72
139	65,10	BISABOLOL C OXIDE	0,09
140	65,38	COMPOUND Mw=220	0,02
141	65,63	BISABOLOL OXIDE B	10,19
142	65,86	SESQUITERPENIC EPOXIDE	0,31
143	65,92	SESQUITERPENOL	0,06
144	66,11	COMPOUND Mw=180	0,01
145	66,32	SESQUITERPENOL	0,01
146	66,38	MINT SULFIDE	0,01
147	66,67	SESQUITERPENIC EPOXIDE	0,02
148	66,80	ALIPHATIC ESTER	0,24
149	67,00	AROMATIC COMPOUND	0,02
150	67,22	T-CADINOL	0,16

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: CHAMOMILE GERMAN ESSENTIAL OIL (BULGARIA) - 11331

Peak	RT (min)	Compound name	%
151	67,59	BISABOLOL OXIDE A	7,54
152	67,87	SESQUITERPENOL	0,07
153	68,01	alpha-MUUROLOL	0,07
154	68,39	AROMATIC COMPOUND	0,04
155	68,53	SESQUITERPENOL	0,02
156	68,58	SESQUITERPENIC EPOXIDE	0,04
157	68,69	delta-CADINOL	0,03
158	68,84	SESQUITERPENOL	0,03
159	69,32	SESQUITERPENIC EPOXIDE	0,02
160	69,50	alpha-BISABOLOL	0,59
161	69,87	BISABOLOL OXIDE ISOMER	0,46
162	70,03	alpha-CADINOL	0,19
163	70,14	SESQUITERPENIC EPOXIDE	0,14
164	70,25	FARNESYL ACETATE	0,02
165	70,60	SESQUITERPENIC EPOXIDE	0,07
166	70,91	SESQUITERPENOL	0,03
167	71,07	BERGAMOTOL ISOMER	0,16
168	71,62	ALIPHATIC ESTER	0,03
169	71,83	AROMATIC COMPOUND	0,04
170	71,98	SESQUITERPENIC EPOXIDE	0,03
171	72,09	CAPRIC ACID	0,10
172	72,52	ALIPHATIC ALCOHOL	0,02
173	72,76	SESQUITERPENIC EPOXIDE	0,02
174	72,91	AROMATIC COMPOUND	0,03
175	73,28	SESQUITERPENONE	0,04
176	73,44	COMPOUND Mw=200	0,02
177	73,57	MATRICARIA ESTER	0,26
178	73,89	COMPOUND Mw=248	0,05
179	74,11	GERANYLLINALOOL	0,10
180	74,40	TRICOSANE	0,14

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: CHAMOMILE GERMAN ESSENTIAL OIL (BULGARIA) - 11331

Peak	RT (min)	Compound name	%
181	74,61	BERGAMOTOL ISOMER	0,01
182	74,98	AROMATIC COMPOUND	0,01
183	75,21	TERPENIC ESTER	0,01
184	75,61	AROMATIC COMPOUND	0,01
185	75,70	KETONIC COMPOUND	0,05
186	76,05	SESQUITERPENIC EPOXIDE	0,06
187	76,36	AROMATIC COMPOUND	0,08
188	76,65	SESQUITERPENIC EPOXIDE	0,01
189	76,86	ALIPHATIC ALCOHOL	0,01
190	77,02	SESQUITERPENOL	0,02
191	77,22	DITERPENE Mw=272	0,02
192	77,55	CHAMAZULEN	7,13
193	78,35	SESQUITERPENIC ALCOHOL	0,03
194	78,61	alpha-BISABOLOL A OXIDE	5,38
195	78,90	SESQUITERPENIC EPOXIDE	0,02
196	78,95	TETRACOSANE	0,03
197	79,23	AROMATIC COMPOUND	0,02
198	81,70	AROMATIC COMPOUND	0,04
199	82,42	LAURIC ACID	0,02
200	82,46	ALIPHATIC ESTER	0,02
201	83,39	PENTACOSANE	0,29
202	84,46	SYRINGALDEHYDE	0,03
203	85,28	ALIPHATIC ESTER	0,03
204	85,64	COMPOUND Mw=220	0,02
205	86,35	ALIPHATIC ESTER	0,02
206	86,80	DITERPENE Mw=272	0,02
207	87,53	PHYTOL	0,15
208	89,30	DITERPENE Mw=272	0,03
209	90,55	Epi-MANOOL	0,04
210	91,76	HEPTACOSANE	0,05

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: CHAMOMILE GERMAN ESSENTIAL OIL (BULGARIA) - 11331

Peak	RT (min)	Compound name	%
211	98,84	2-ACETYL-6-METHOXY-NAPHTALENE Mw=200	0,70
212	99,61	PALMITIC ACID	0,04
213	100,07	HERNIARIN	0,07
		TOTAL	99,88

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