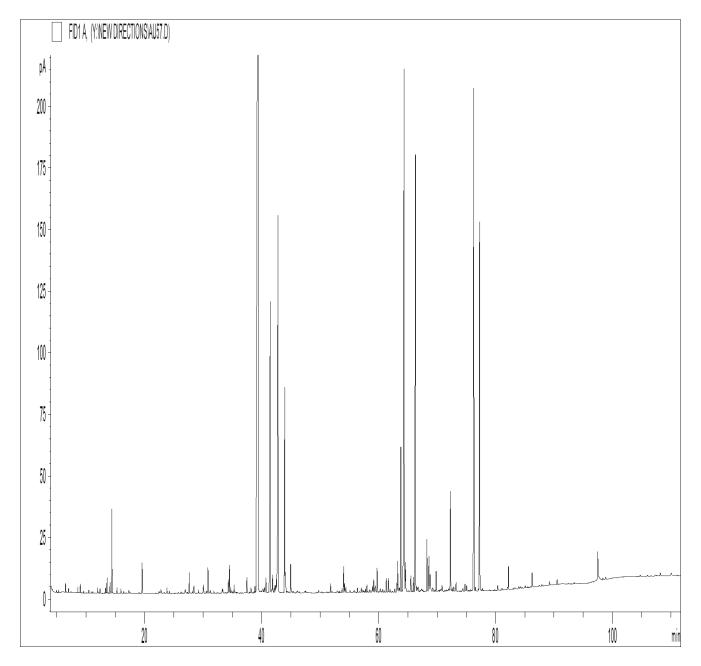


GCMS ANALYSIS

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

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.





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

Peak	RT (min)	Compound name	%
1	5.29	METHYL VINYL KETONE	0.02
2	6.47	alpha-PINENE	0.04
3	6.54	alpha-THUYENE	0.01
4	7.01	ETHYL 2-METHYLBUTYRATE	0.02
5	8.57	beta-PINENE	0.04
6	8.98	SABINENE	0.06
7	9.54	PROPYL 2-METHYLBUTYRATE	0.01
8	10.44	beta-MYRCENE	0.02
9	10.85	TERPENE ISOMER	0.01
10	11.12	alpha-TERPINENE	0.01
11	11.95	LIMONENE	0.05
12	12.37	1,8-CINEOLE	0.04
13	13.31	FURAN, 2-PENTYL-	0.04
14	13.44	ALIPHATIC ESTER	0.01
15	13.56	cis-beta-OCIMENE	0.13
16	14.07	gamma-TERPINENE	0.10
17	14.39	trans-beta-OCIMENE	0.69
18	15.26	p-CYMENE	0.05
19	15.93	TERPINOLENE	0.04
20	16.43	OCTANAL	0.02
21	17.29	TRIDECANE	0.03
22	19.01	5-HEPTEN-2-ONE, 6-METHYL-	0.01
23	19.55	ARTEMISIA KETONE	0.30
24	22.47	NONANAL	0.02
25	22.70	ALIPHATIC ESTER	0.02
26	22.79	YOMOGI ALCOHOL	0.04
27	23.82	ARTEMISIA ALCOHOL	0.06
28	24.25	SILPHIPERFOL-7-ENE	0.03
29	25.74	TETRADECANE	0.02
30	26.21	delta-ELEMENE	0.02

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

Peak	RT (min)	Compound name	%
31	26.90	alpha-LONGIPINENE	0.02
32	26.96	SILPHINENE	0.05
33	27.32	AROMATIC COMPOUND Mw=174	0.02
34	27.64	BICYCLOELEMENE	0.23
35	28.17	3-HEXENYL ISOVALERATE	0.02
36	28.43	alpha-COPAENE	0.10
37	29.19	ARTEMISIA ALCOHOL ISOMER	0.04
38	29.93	PENTADECANE	0.01
39	30.06	MODHEPHENE	0.11
40	30.53	alpha-GURJUNENE	0.03
41	30.83	alpha-ISOCOMENE	0.31
42	31.24	beta1-CUBEBENE	0.04
43	31.84	LINALOOL	0.02
44	33.25	epsilon-CADINENE	0.04
45	33.36	beta-ISOCOMENE	0.06
46	33.41	BORNYL ACETATE	0.02
47	34.06	alpha-trans-BERGAMOTENE	0.02
48	34.32	beta-ELEMENE	0.19
49	34.54	beta-CARYOPHYLLENE	0.34
50	34.78	SELINA-3,7(11)-DIENE	0.05
51	34.88	TERPINENE-4-OL	0.01
52	35.06	SESQUITERPENE	0.03
53	35.30	AROMADENDRENE	0.10
54	35.45	LAVANDULYL ACETATE	0.02
55	35.70	COPACAMPHENE	0.01
56	35.86	SESQUITERPENE	0.01
57	37.06	PREZIZA-7-ENE ISOMER	0.01
58	37.23	GERMACRENE A	0.02
59	37.48	ALLO-AROMADENDRENE	0.21
60	37.87	ALIPHATIC ALCOHOL	0.01

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

Peak	RT (min)	Compound name	%
61	38.17	3,7-NONADIEN-2-ONE, 4,8-DIMETHYL-	0.07
62	38.45	ZONARENE	0.01
63	38.48	1-NONANOL	0.01
64	38.69	cis-4,5-MUUROLADIENE	0.02
65	38.85	alpha-HUMULENE	0.09
66	39.44	E-beta-FARNESENE	38.21
67	39.53	SESQUITERPENE Mw=202	0.06
68	39.75	NERAL	0.05
69	39.96	Z-beta-FARNESENE	0.05
70	40.17	CURCUMENE ISOMER	0.06
71	40.22	gamma-MUUROLENE	0.08
72	40.44	gamma-CURCUMENE	0.10
73	40.74	LEDENE	0.25
74	40.98	SESQUITERPENE Mw=202	0.02
75	41.45	GERMACRENE D	4.75
76	41.70	SESQUITERPENE	0.05
77	41.76	beta-SELINENE	0.03
78	41.88	AROMATIC COMPOUND	0.24
79	41.98	PIPERITONE	0.02
80	42.19	alpha-ZINGIBERENE	0.09
81	42.37	alpha-MUUROLENE	0.12
82	42.51	NERYL ACETATE	0.17
83	42.64	beta-BISABOLENE	0.31
84	42.80	BICYCLOGERMACRENE	5.78
85	43.07	COMPOUND Mw=172	0.02
86	43.24	CEDRENE ISOMER	0.02
87	43.72	SESQUITERPENE Mw=202	0.02
88	43.95	E,E-alpha-FARNESENE	2.57
89	44.03	delta-CADINENE	0.20
90	44.12	SESQUITERPENE	0.08

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

Peak	RT (min)	Compound name	%
91	44.30	SESQUITERPENE Mw=202	0.02
92	44.46	SESQUITERPENE Mw=202	0.02
93	44.47	METHYL SALICYLATE	0.02
94	44.95	SESQUITERPENE Mw=202	0.12
95	44.96	beta-SESQUIPHELLANDRENE	0.23
96	45.06	alpha-CURCUMENE	0.04
97	45.19	trans-alpha-BISABOLENE	0.02
98	45.39	CADINA-1,4-DIENE	0.02
99	45.56	SESQUITERPENE Mw=202	0.01
100	46.03	SESQUITERPENE Mw=202	0.03
101	46.07	AROMATIC COMPOUND Mw=200	0.02
102	46.20	alpha-AMORPHENE	0.03
103	47.37	2,4-DECADIENAL	0.03
104	47.53	AROMATIC COMPOUND	0.04
105	47.91	beta-DAMASCENONE	0.01
106	47.95	SESQUITERPENE	0.02
107	49.44	TERPENIC ESTER	0.01
108	49.75	GERANIOL	0.04
109	50.12	SESQUITERPENIC EPOXIDE	0.02
110	50.30	SESQUIROSEFURAN Mw=218	0.02
111	51.11	TERPENIC ESTER	0.02
112	51.32	Epi-CUBEBOL	0.01
113	51.78	COMPOUND Mw=218	0.13
114	52.03	AROMATIC COMPOUND	0.02
115	52.52	HUMULENE EPOXIDE	0.02
116	52.72	NONADECANE	0.01
117	52.83	GERANYL BUTYRATE	0.01
118	52.94	PALUSTROL	0.03
119	53.12	SESQUITERPENIC EPOXIDE	0.01
120	53.36	SESQUITERPENIC EPOXIDE	0.02

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

Peak	RT (min)	Compound name	%
121	53.75	beta-IONONE	0.07
122	54.03	DENDROLASIN Mw=218	0.29
123	54.17	SESQUITERPENIC EPOXIDE	0.11
124	54.40	SESQUITERPENIC EPOXIDE	0.08
125	55.11	SESQUITERPENIC EPOXIDE	0.03
126	55.72	ISOCARYOPHYLLENE OXIDE	0.03
127	55.89	AROMATIC COMPOUND	0.03
128	56.36	CARYOPHYLLENE OXIDE	0.06
129	56.75	COMPOUND Mw=162	0.02
130	57.04	SESQUITERPENIC EPOXIDE	0.07
131	57.31	MAALIOL	0.05
132	57.44	DEHYDRO-beta-IONONE	0.02
133	57.78	CHRYSANTHEMOL ISOMER	0.05
134	58.00	COMPOUND Mw=178	0.11
135	58.16	SESQUITERPENOL	0.01
136	58.43	SESQUITERPENIC EPOXIDE	0.04
137	58.50	COMPOUND Mw=192	0.03
138	58.67	AROMATIC COMPOUND	0.01
139	58.85	SESQUITERPENIC EPOXIDE	0.02
140	58.96	LEDOL	0.08
141	59.15	SESQUITERPENIC EPOXY ACETATE Mw=178	0.18
142	59.42	PENTADECANAL	0.15
143	59.74	NEROLIDOL	0.28
144	60.05	GERMACRENE D-4-OL	0.02
145	60.28	GLEENOL	0.07
146	60.44	Epi-CUBENOL	0.02
147	60.69	CUBENOL	0.06
148	60.96	ALIPHATIC ALCOHOL	0.03
149	61.32	GLOBULOL	0.18
150	61.69	VIRIDIFLOROL	0.18

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

Peak	RT (min)	Compound name	%
151	61.99	AROMATIC COMPOUND	0.04
152	62.34	SESQUITERPENOL	0.01
153	62.77	10-epi-gamma-EUDESMOL	0.05
154	63.11	ALIPHATIC ESTER	0.11
155	63.26	ALIPHATIC ESTER	0.39
156	63.48	ALIPHATIC ESTER	0.06
157	63.58	BISABOLOL C OXIDE	0.07
158	63.80	SPATHULENOL	2.01
159	64.06	AROMATIC COMPOUND	0.03
160	64.35	BISABOLOL OXIDE B	9.27
161	64.43	TRIMETHYL-PENTADECANONE	0.15
162	64.59	SESQUITERPENIC EPOXIDE	0.43
163	64.88	SESQUITERPENOL	0.02
164	65.00	COMPOUND Mw=180	0.02
165	65.09	MINT SULFIDE	0.02
166	65.42	SESQUITERPENIC EPOXIDE	0.02
167	65.51	ALIPHATIC ESTER	0.23
168	65.76	AROMATIC COMPOUND	0.02
169	65.96	T-CADINOL	0.19
170	66.30	BISABOLOL OXIDE A	6.88
171	66.44	SESQUITERPENOL	0.07
172	66.64	MATRICARIA ESTER ISOMER	0.04
173	66.65	THYMOL	0.05
174	66.76	alpha-MUUROLOL	0.08
175	66.92	COMPOUND Mw=236	0.01
176	67.09	AROMATIC COMPOUND	0.03
177	67.23	SESQUITERPENIC EPOXIDE	0.02
178	67.28	COMPOUND Mw=206	0.01
179	67.35	delta-CADINOL	0.08
180	67.57	SESQUITERPENOL	0.03

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

Peak	RT (min)	Compound name	%
181	67.75	SESQUITERPENIC EPOXIDE	0.02
182	68.26	alpha-BISABOLOL	0.75
183	68.59	LACHNOPHYLLUM METHYL ESTER	0.15
184	68.60	BISABOLOL OXIDE ISOMER	0.30
185	68.80	alpha-CADINOL	0.24
186	68.83	FARNESYL ACETATE	0.17
187	68.97	COMPOUND Mw=162	0.03
188	69.26	SESQUITERPENOL	0.07
189	69.31	SESQUITERPENIC EPOXIDE	0.04
190	69.63	SESQUITERPENOL	0.04
191	69.82	BERGAMOTOL ISOMER	0.26
192	70.17	MATRICARIA ESTER ISOMER	0.03
193	70.36	PAEONOL Mw=166	0.04
194	70.52	ALIPHATIC ESTER	0.03
195	70.67	AROMATIC COMPOUND	0.05
196	70.84	SESQUITERPENIC EPOXIDE	0.05
197	70.85	CAPRIC ACID	0.05
198	70.93	SESQUITERPENIC EPOXIDE	0.02
199	71.26	SESQUITERPENIC EPOXIDE	0.02
200	71.46	SESQUITERPENIC EPOXIDE	0.03
201	71.61	AROMATIC COMPOUND	0.03
202	71.72	SESQUITERPENOL	0.03
203	71.93	SESQUITERPENOL	0.03
204	71.95	SESQUITERPENONE	0.03
205	72.06	ALIPHATIC ALCOHOL	0.02
206	72.27	MATRICARIA ESTER	1.23
207	72.58	COMPOUND Mw=248	0.05
208	72.81	SESQUITERPENIC EPOXIDE	0.06
209	72.84	GERANYLLINALOOL	0.06
210	73.19	ALIPHATIC ESTER	0.06

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Peak	RT (min)	Compound name	%
211	73.24	TRICOSANE	0.11
212	73.90	SESQUITERPENIC EPOXIDE	0.01
213	74.08	ALIPHATIC ESTER	0.01
214	74.36	ALIPHATIC ALCOHOL	0.02
215	74.41	SESQUITERPENIC EPOXIDE	0.05
216	74.76	SESQUITERPENIC EPOXIDE	0.10
217	74.94	SESQUITERPENIC EPOXIDE	0.02
218	75.06	AROMATIC COMPOUND	0.08
219	75.76	SESQUITERPENOL	0.03
220	76.27	CHAMAZULEN	6.88
221	76.53	MATRICARIA ESTER ISOMER	0.06
222	77.05	SESQUITERPENIC ALCOHOL	0.03
223	77.28	alpha-BISABOLOL A OXIDE	5.17
224	77.59	SESQUITERPENIC EPOXIDE	0.02
225	77.78	TETRACOSANE	0.04
226	79.00	AROMATIC COMPOUND	0.02
227	79.86	AROMATIC COMPOUND	0.01
228	80.38	AROMATIC COMPOUND	0.06
229	81.05	SESQUITERPENOL	0.02
230	81.15	COMPOUND Mw=294	0.02
231	82.21	PENTACOSANE	0.28
232	83.00	SYRINGADEHYDE	0.02
233	83.31	DITERPENIC COMPOUND	0.02
234	83.95	METHYL LINOLEATE	0.05
235	84.19	SESQUITERPENIC EPOXIDE	0.02
236	84.31	SESQUITERPENIC EPOXIDE	0.03
237	84.58	HENEICOSENE ISOMER	0.02
238	85.09	COMPOUND Mw=234	0.03
239	85.48	DITERPENIC COMPOUND	0.01
240	85.95	BENZYL BENZOATE	0.01

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

Peak	RT (min)	Compound name	%
241	86.25	PHYTOL	0.18
242	87.93	Epi-MANOOL	0.03
243	89.24	MYRISTIC ACID	0.05
244	90.54	HEPTACOSANE	0.06
245	97.49	2-ACETYL-6-METHOXY-NAPHTALENE Mw=200	0.73
246	98.37	HERNIARIN	0.03
247	98.85	NONACOSANE	0.05
		TOTAL	99.92

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