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Healing Body, Mind and Spirit with Pure Essential Oils

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German Chamomile

Matricaria recutita

Batch No. UK-58801

Organically grown, Great Britain

Monoterpenes 2.9%

trans- β -ocimene	2.10
cis- β -ocimene	0.35
γ terpinene	0.23
sabinene	0.15
terpinolene	0.07

Monoterpenols 0.11%

2,4-decadienol	0.11
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Sesquiterpenols 7.9%

sesquiphellandrol isomer	2.11
spathulenol	1.13
β -eudesmol ++ sesquiterpenol	1.11
α -bisabolol	1.02
phytol	0.37
santalol	0.24
nerolidol	0.20
palustrol + sesquiterpenol	0.14
isopathulenol	0.12
ledol	0.09
globulol	0.08
viridiflorol	0.08
other sesquiterpenols	1.21

Lactones 0.6%

dendrolasine	0.30
sesquirosefuran isomer	0.20
furan 2-pentyl	0.10

Sesquiterpenes 67.09%

E(trans)-b-farnesene	45.05
bicyclogermacrene	4.8
germacrene d	4.16
E,E-a-farnesene	3.57
Chamazulene	2.98
farnesene isomer	1.1
α -isocomene	0.92
β -bisabolene	0.57
β -selinene	0.4
β -caryophyllene	0.33
α -acarodiene	0.32
allo-aromadendrene	0.25
ledene	0.25
modhephene	0.22
bicycloelemene	0.2
δ -cadinene	0.18
aromadendrene	0.16
β -isocomene	0.13
β -elemene	0.13
tetradecane	0.12
silphinene	0.12
α -humulene	0.10
γ -muurolene	0.09
calamenene	0.09
γ -curcumene	0.08
α -muurolene	0.08
α -copaene	0.07
α -zingiberene	0.07
valencene	0.06
α -curcumene	0.06
α -calacorene	0.06
other sesquiterpenes	0.37

Ketones 1.98%

pentadecanone trimethyl	1.09
artemisia ketone	0.68
NONA-3,8-DIEN-2-ONE, 3,8-DIMETHYL	0.12
β -ionone	0.09

Esters 0.25%

matricaria ester	0.09
hexyl butanoate	0.08
aliphatic methyl ester	0.08

Aldehydes 0.48%

pentadecanal	0.29
nonanal	0.13
aliphatic aldehyde	0.06

Ethers 15.28%

α -bisabolol oxide B	6.26
bisabolol oxide A	4.17
a-bisabolol oxide A	3.79
sesquiterpenic epoxide	0.67
bisabolol oxide isomer	0.36
bisabolol C oxide	0.09
1,8 cineole	0.08
sesquiterpene oxide	-0.14

Raw Material: German Chamomile
 INCI Name: Matricaria recutita
 Production Steam Dist., Great Britain
 Date of Analysis: 01/10/2018

NOTE: Constituents listed are constituents with percentages higher than .05% of the chemical makeup. To review all constituents, consult the original report.

CUSTOMER :

**Nature's Gift Aromatherapy
316 Old Hickory Blvd East
Madison, TN 37115**

**615-612-4270
sold@naturesgift.com**

Sample nature : ESSENTIAL OIL
Botanical species : MATRICARIA CHAMOMILLA
Reference name : GERMAN CHAMOMILE
Batch number : UK-58801
Origin :
Part: PLANT
Pyrenessences reference : N627

Date of reception : 15/09/2017 **Date analysis :** 01/10/2018
Packaging : Blue flask of 5 ml – ambient temperature
Analysis : Classic GC
Shelf life : 1 year

Comments and conclusions :

Validated report by :

Daniel DANTIN



GAS CHROMATOGRAPHY norm NF ISO 11024

Analysis conditions :

CPG 6890 / MS 5973 – Column : VF WAX polar 60 m × 0,25 mm × 0,5 µm

CPG 6890 FID - Column : VF WAX polar 60 m × 0,25 mm × 0,5 µm

Temperature program : 6 mn to 60 °C -2 °C/mn→250 °C - 20mn to 250 °C

Carrier gas He : 23 psis/MS – 30 psis/FID

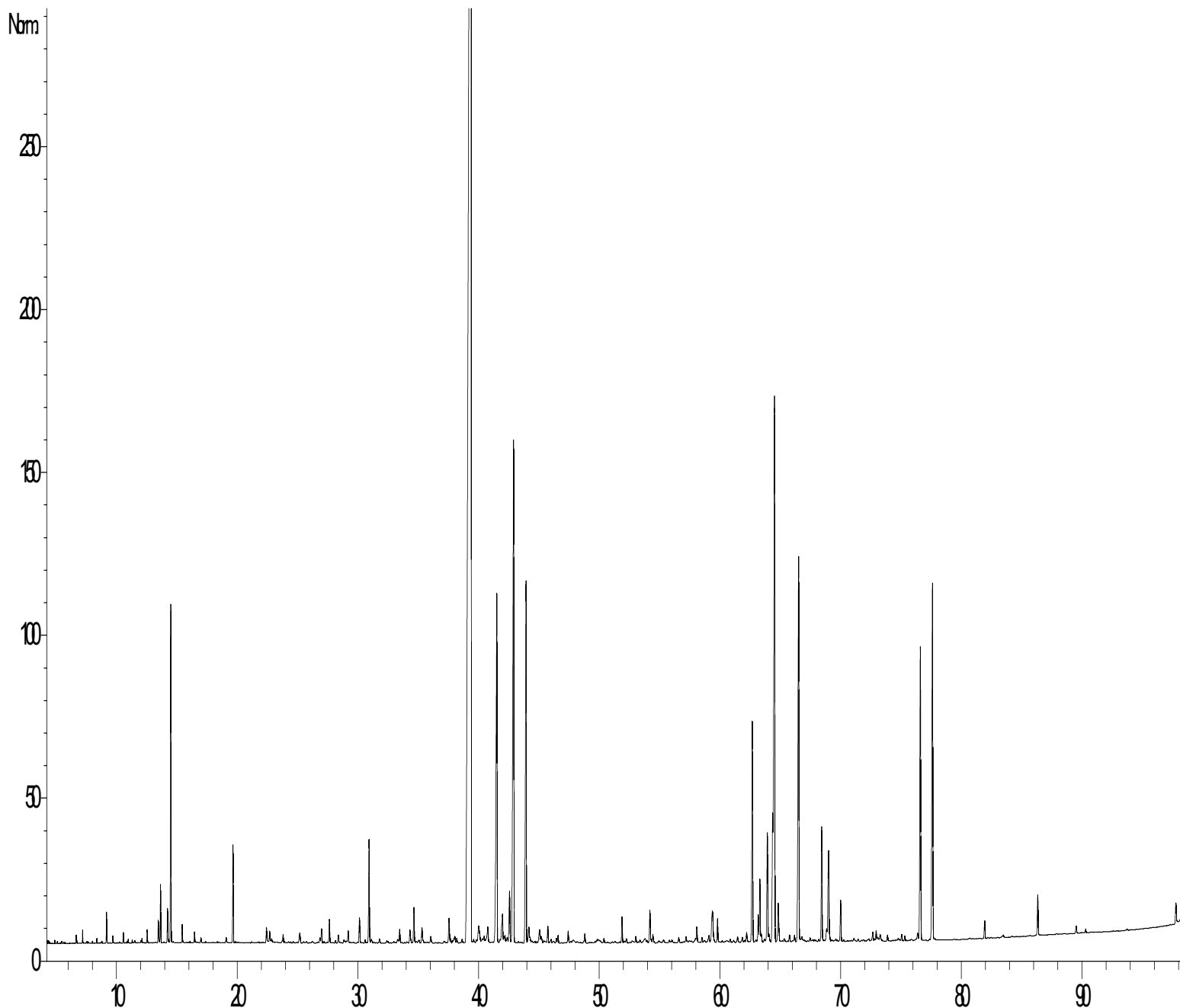
Sample injection / split : 1 µl of 10 % solution in hexane,

Mass range : 30 to 350, Oil components are identified by a combination of retention times (our own database) and mass spectra library NKS 75 000 records,

Percentages are calculated from GC/FID peaks areas without using corrections factors,

Chromatographic profile (GC/FID)

FID1, (UNOFFICIAL) (S627D)



Identification results 1: GERMAN CHAMOMILE BATCH GC17.74SG

Peak	RT (min)	Compound name	%	Egyptian Norm	Hungarian Norm
1	4,9	NONANE	0,01		
2	5,1	METHYL VINYL KETONE	0,01		
3	5,4	FURAN, 2-ETHYL-	0,01		
4	6,6	α -PINENE	0,05		
5	7,2	ETHYL 2-METHYLBUTYRATE	0,05		
6	7,5	CAMPHENE	0,01		
7	8,0	HEXANAL	0,01		
8	8,4	TRIDECANE	0,02		
9	8,8	β -PINENE	0,01		
10	9,2	SABINENE	0,15		
11	9,6	ISOBUTYL 2-METHYLBUTYRATE	0,03		
12	10,5	β -MYRCENE	0,05		
13	10,9	TERPENE ISOMERE	0,02		
14	11,3	α -TERPINENE	0,02		
15	11,5	HEPTANAL	0,02		
16	12,1	LIMONENE	0,03		
17	12,5	1,8-CINEOLE	0,08		
18	13,4	FURAN 2-PENTYL	0,10		
19	13,5	BUTYL 2-METHYLBUTANOATE	0,05		
20	13,6	Cis- β -OCIMENE	0,35		
21	14,2	γ -TERPINENE	0,23		
22	14,5	Trans- β -OCIMENE	2,10		
23	15,4	p-CYMENE	0,12		
24	16,5	TERPINOLENE	0,07		
25	17,0	OCTANAL	0,03		
26	19,1	5-HEPTEN-2-ONE, 6-METHYL-	0,04		
27	19,6	ARTEMISIA KETONE	0,68		
28	22,4	NONANAL	0,13		
29	22,6	HEPTADIENE ISOMER	0,10		
30	22,8	SESQUITERPENE	0,05		
31	23,7	ARTEMISYL ACETATE	0,02		
32	23,8	HEXYL BUTANOATE	0,08		
33	25,2	TETRADECANE	0,12		
34	26,8	LONGIPINENE	0,05		
35	27,0	SILPHINENE Mw=204	0,12		
36	27,6	BICYCLOELEMENE	0,20		
37	28,1	Cis-3-HEXENYL VALERATE	0,02		
38	28,3	α -COPAENE	0,07		
39	28,8	DECANAL	0,03		
40	29,2	ARTEMISIA ALCOHOL	0,09		
41	30,1	MODHEPHENE	0,22		
42	30,6	α -GURJUNENE	0,03		
43	30,9	α -ISOCOMENE Mw=204	0,92		
44	31,1	β 1-CUBEBENE	0,04		
45	31,7	LINALOOL	0,03		

Identification results 2: GERMAN CHAMOMILE BATCH GC17.74SG

Peak	RT (min)	Compound name	%	Egyptian Norm	Hungarian Norm
46	32,4	1-OCTANOL	0,02		
47	33,2	ϵ -CADINENE	0,04		
48	33,5	β -ISOCOMENE	0,13		
49	34,3	β -ELEMENE	0,13		
50	34,6	β -CARYOPHYLLENE	0,33		
51	34,8	SESQUITERPENE	0,03		
52	35,0	TERPINENE-4-OL	0,05		
53	35,3	AROMADENDRENE	0,16		
54	36,0	SESQUITERPENE	0,07		
55	37,5	ALLO-AROMADENDRENE	0,25		
56	37,7	Trans-PINOCARVEOL	0,03		
57	38,0	NONA-3,8-DIEN-2-ONE, 3,8-DIMETHYL-	0,12		
58	38,2	SESQUITERPENE	0,04		
59	38,6	1-NONANOL	0,04		
60	39,0	α -HUMULENE	0,10		
61	39,3	E(trans)-β-FARNESENE	45,05	15 – 35	20 - 51
62	39,5	γ -SELINENE	0,05		
63	39,8	SESQUITERPENE	0,05		
64	40,0	α -ACARODIENE	0,32		
65	40,3	γ -CURCUMENE	0,08		
66	40,5	γ -MUUROLENE	0,09		
67	40,8	LEDENE	0,25		
68	41,5	GERMACRENE D	4,16		
69	41,8	CADINENE ISOMER	0,05		
70	42,0	β -SELINENE	0,40		
71	42,1	VALENCENE	0,06		
72	42,2	α -ZINGIBERENE	0,07		
73	42,4	α -MUUROLENE	0,08		
74	42,6	β -BISABOLENE	0,57		
75	42,8	FARNESENE ISOMER	1,10		
76	42,9	BICYCLOGERMACRENE	4,80		
77	43,9	E,E-α-FARNESENE	3,57		
78	44,1	δ -CADINENE	0,18		
79	44,2	γ -CADINENE	0,04		
80	45,0	2(3H)-FURANONE, 5-(2,5-DIMETHYLPHENYL)-4-METHYL-	0,16		
81	45,1	α -CURCUMENE	0,06		
82	45,2	α -BISABOLENE	0,04		
83	45,4	SESQUITERPENE Mw=202	0,06		
84	45,7	COMPOUND Mw=220	0,17		
85	46,0	SESQUITERPENE Mw=202	0,07		
86	46,4	NAPHTALENE METHYL COMPOUND	0,04		
87	46,6	SESQUITERPENE Mw=202	0,07		
88	47,4	2,4-DECADIENOL	0,11		
89	48,8	CALAMENENE	0,09		
90	50,3	AROMATIC COMPOUND	0,04		

Identification results 3: GERMAN CHAMOMILE BATCH GC17.74SG

Peak	RT (min)	Compound name	%	Egyptian Norm	Hungarian Norm
91	51,8	SESQUIROSEFURAN ISOMER Mw=218	0,20		
92	52,2	α -CALACORENE	0,06		
93	53,0	AROMATIC COMPOUND	0,05		
94	53,4	NERYL METHYLBUTYRATE	0,04		
95	53,7	PALUSTROL + SESQUITERPENOL	0,14		
96	54,0	TETRADECANAL	0,03		
97	54,2	DENDROLASINE	0,30		
98	54,3	SESQUITERPENIC COMPOUND	0,02		
99	54,4	β -IONONE	0,09		
100	54,9	FURAN, 2-METHYL-5-(1,1,5-TRIMETHYL-5-HEXENYL)-	0,02		
101	55,3	KETONIC COMPOUND Mw=200	0,04		
102	55,8	AROMATIC COMPOUND	0,03		
103	56,0	CURCUMENIC COMPOUND	0,03		
104	56,6	CARYOPHYLLENE EPOXIDE	0,05		
105	57,2	SESQUITERPENOL	0,07		
106	58,0	SESQUITERPENOL	0,06		
107	58,1	SESQUITERPENIC EPOXIDE	0,15		
108	58,5	AROMATIC COMPOUND	0,04		
109	59,1	LEDOL	0,09		
110	59,2	SESQUITERPENOL	0,25		
111	59,4	PENTADECANAL	0,29		
112	59,8	NEROLIDOL	0,20		
113	60,2	GERMACRA-1,5-DIEN-4-OL	0,03		
114	60,6	SESQUITERPENOL	0,03		
115	60,8	SESQUITERPENIC EPOXIDE	0,04		
116	61,1	AROMATIC COMPOUND	0,03		
117	61,4	GLOBULOL	0,08		
118	61,8	VIRIDIFLOROL	0,08		
119	62,2	SESQUITERPENOL	0,12		
120	62,6	SESQUIPHELLANDROL ISOMER	2,11		
121	63,0	10-epi- γ -EUDESMOL	0,04		
122	63,2	SANTALOL ISOMER	0,24		
123	63,3	SESQUITERPENOL	0,58		
124	63,4	SESQUITERPENOL	0,08		
125	63,9	SPATHULENOL	1,13		
126	64,1	BISABOLOL C OXIDE	0,09		
127	64,4	PENTADECANONE TRIMETHYL	1,09		
128	64,5	α-BISABOLOL OXIDE B	6,26	2 - 8	2 - 21
129	64,8	SESQUITERPENIC EPOXIDE	0,44		
130	65,3	ALIPHATIC ESTER	0,05		
131	65,7	BISABOLOL OXIDE ISOMER	0,06		
132	66,2	T-CADINOL	0,06		
133	66,5	BISABOLOL OXIDE A	4,17	2 - 6,5	1 - 4
134	66,8	SESQUITERPENE OXIDE	0,07		
135	67,5	SESQUITERPENOL	0,02		

Identification results 4: GERMAN CHAMOMILE BATCH GC17.74SG

Peak	RT (min)	Compound name	%	Egyptian Norm	Hungarian Norm
136	68,2	LACHNOPHYLLUM METHYL ESTER	0,02		
137	68,4	α-BISABOLOL	1,02	1 - 10	15 - 40
138	68,8	ISOPATHULENOL	0,12		
139	69,0	β-EUDESOL + + SESQUITERPENOL	1,11		
140	70,0	BISABOLOL OXIDE ISOMER	0,36		
141	71,1	CAPRIC ACID	0,03		
142	72,6	MATRICARIA ESTER Mw=174	0,09		
143	72,9	ALIPHATIC ALCOHOL	0,08		
144	73,3	SESQUITERPENIC EPOXIDE	0,08		
145	73,9	AROMATIC COMPOUND	0,05		
146	75,1	ALIPHATIC ALDEHYDE	0,06		
147	75,3	TRICOSANE	0,04		
148	76,3	ALIPHATIC METHYL ESTER	0,08		
149	76,6	CHAMAZULENE	2,98	2 - 5	5 - 22
150	77,6	α-BISABOLOL OXIDE A	3,79	35 - 40	2 - 27
151	81,9	PENTACOSANE	0,16		
152	86,3	PHYTOL	0,37		
153	89,5	MYRISTIC ACID	0,07		
154	90,3	HEPTACOSANE	0,03		
155	97,8	PALMITIC ACID	0,21		
		TOTAL	99,99		