

## Certificate of Analysis

### German Chamomile CO2-to (organic)

#### Batch #DE-59296

production: November 2019      retest: November 2024  
raw material:      *Chamomilla recutita* - Flowers, dried, from organic farming  
country of origin of raw material: France  
country of origin of product: Germany  
D/E - ratio:      20 - 33 kg raw material yield 1 kg product.

#### Sensory Check

| feature     | reference                          | result |
|-------------|------------------------------------|--------|
| Appearance: | Green-brown colour, liquid at 40°C | meets  |
| Odour:      | fine chamomile-like smell          | meets  |

#### Analytical Check

| feature   | method                               | limits    | value          | unit        |
|---|--------------------------------------|-----------|----------------|-------------|
| Content of essential oil  | 21.006.01, Distillation, gravimetric | 7 - 17    | 12,1           | % (g/ 100g) |
| Relative composition of the essential oil:                              | GC, 100 % method                     |           |                |             |
| beta Farnesene  | 21.093.03, GC                        | n.s.      | 25,0           | %           |
| alpha Farnesene   | 21.093.03, GC                        | n.s.      | 1,6            | %           |
| Spathulenol   | 21.093.03, GC                        | n.s.      | 1,5            | %           |
| Bisabolol oxides A + B  | 21.093.03, GC                        | 5 - 20    | 14,7 (9,1+5,6) | %           |
| Bisabolone oxide  | 21.093.03, GC                        | n.s.      | 0,34           | %           |
| alpha Bisabolol   | 21.093.03, GC                        | 20 - 45   | 25,4           | %           |
| Chamazulene   | 21.093.03, GC                        | n.s.      | 12,4           | %           |
| cis-En-Yn Dicycloether  | 21.093.03, GC                        | n.s.      | 6,3            | %           |
| trans-En-Yn Dicycloether  | 21.093.03, GC                        | n.s.      | 0,26           | %           |
| alpha Bisabolol in extract  | 21.219.01, HPLC                      | n.s.      | 2,4            | %           |
| Content of Matricine / Chamazulene (analysed as Chamazulene) in extract | 21.023.02, Spectrometry              | 0,5 - 2,5 | 1,5            | %           |
| Content of Anthecotulid in extract                                      | 21.153.01, HPLC                      | < 0,05    | meets          | %           |

n.s. = not specified

n.d. = not detected

Furthermore the extract contains a small amount of Apigenine and Apigenine-7-glycoside (< 0,1 %)

The product meets specifications no. 019.002\_07\_AS and 66.145.07; date of analysis: 2019.11.25

Digitally signed by Anja Cawelius  
Reason: Quality Control  
Date: 2019.11.25 11:23:50 +01'00'

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