



# CERTIFICATE OF ANALYSIS

COA\*



## BEWIT Betel Leaf

**Czech:** BEWIT Pepřovník betelový

**Latin:** Piper betle

Batch number: AX2022/02



CTEO

★★★★★  
**QUALITY**  
GUARANTEED

We have developed our own set of standards and protocols CTEO® – **CERTIFIED THERAPEUTIC ESSENTIAL OILS** to monitor, check and evaluate the quality of our essential oils. Our goal is to consistently offer our customers essential oils in the best and most beneficial quality.

## Certificate of analysis disclaimer

COA is a document published by BEWIT Natural Medicine, s.r.o., which contains both general and specific information about essential oils and other BEWIT products. The COA includes information from literary publications and other publicly available sources as well as selected sensometric analyses from BEWIT laboratories (BEWIT ESSENTIAL LABORATORIES), supplier analyses and, in some cases, tests from independent laboratories. The COA published for a given product may not always match the product batch on offer at BEWIT at the time and may not always describe all batches of the given product that may be on offer at the time.



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## General information

|                              |   |
|------------------------------|---|
| <b>Batch number</b>          | AX2022/02   |
| <b>English</b>               | BEWIT Betel Leaf                                    |
| <b>Czech</b>                 | BEWIT Pepřovník betelový                            |
| <b>Latin</b>                 | Piper betle   |
| <b>Country of origin</b>     | India   |
| <b>Part of a plant</b>       | Leaves  |
| <b>Method of acquisition</b> | Steam distilled                                     |
| <b>Color</b>                 | Light yellow to light brown                         |
| <b>Odor</b>                  | Fenolic, smoky, spicy                               |
| <b>cas number</b>            | 84775-81-5  |
| <b>Main components</b>       | Eugenol, estragole, bornyl acetate, geranyl acetate |
| <b>Refractometric index</b>  | 1,5252  |
| <b>Optical rotation</b>      | -1,5° to -4°  |



## General information

### Components

| COMPOUND                     | RELATIVE CONTENT (%) |
|------------------------------|----------------------|
| Eugenol                      | 19,8                 |
| Estragole                    | 14,4                 |
| Bornyl acetate               | 13,0                 |
| Geranyl acetate              | 12,0                 |
| Linalyl acetate              | 8,8                  |
| $\beta$ -caryophyllene       | 7,4                  |
| 4-allyl-1,2-dimethoxybenzene | 1,1                  |
| 1,8 Cineole (Eucalyptol)     | 0,5                  |
| Coumarin                     | 0,3                  |
| Camphene                     | 0,2                  |
| D-limonene                   | 0,2                  |
| Linalool                     | 0,2                  |
| Neryl acetate                | 0,2                  |



## List of cosmetic allergens

| Allergen INCI name   | CAS number | %    |
|--|------------|------|
| Amyl cinnamal  | 122-40-7   | --   |
| Amylcinnamyl alcohol   | 101-85-9   | --   |
| Benzyl alcohol   | 100-512-6  | --   |
| Benzyl salicylate  | 118-58-1   | --   |
| Cinnamyl alcohol   | 104-54-1   | --   |
| Cinnamal   | 104-55-2   | --   |
| Citral   | 5392-40-5  | --   |
| Coumarin   | 91-64-5    | 0,3  |
| Eugenol  | 97-53-0    | 19,8 |
| Geraniol   | 106-24-1   | --   |
| Hydroxycitronellal   | 07-75-5    | --   |
| Hydroxymethylpentyl-cyclohexenecarboxaldehyde                | 31906-04-4 | --   |
| Isoeugenol   | 97-54-1    | --   |
| Anisyl alcohol   | 105-13-5   | --   |
| Benzyl benzoate  | 120-51-4   | --   |
| Benzyl cinnamate   | 103-41-3   | --   |
| Citronellol  | 106-22-9   | --   |
| Farnesol   | 4602-84-0  | --   |
| Hexyl cinnamaldehyde   | 101-86-0   | --   |
| D-limonene   | 5989-27-5  | 0,2  |
| Linalool   | 78-70-6    | 0,2  |
| Methyl heptine carbonate                                     | 111-12-6   | --   |
| 3-Methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one | 127-51-5   | --   |
| Oak moss   | 90028-68-5 | --   |
| Tree moss  | 90028-67-4 | --   |



## Independent tests and studies

MADHUMITA, Mitali, Proshanta GUHA a Ahindra NAG. Extraction of betel leaves (Piper betle L.) essential oil and its bio-actives identification: Process optimization, GC-MS analysis and anti-microbial activity. Industrial Crops and Products [online]. 2019, 138 [cit. 2022-01-15]. ISSN 09266690. Dostupné z: doi:10.1016/j.indcrop.2019.111578

TISSERAND, Robert a Rodney YOUNG. Essential oil safety: a guide for health care professionals. Second edition. Edinburgh: Elsevier, 2013. ISBN 9780443062414.



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