



# CERTIFICATE OF ANALYSIS

COA\*



## BEWIT Betel Leaf

**Czech:** Pepřovník betelový esenciální olej

**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.



**BEWIT Natural Medicine, s.r.o.** ID: 29443237  
Michalská 2030  
710 00 Ostrava  
Czech Republic  
VAT ID: CZ29443237  
info@bewit.love  
www.BEWIT.LOVE

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## General information

<b>Batch number</b>	AX2022/02
<b>English</b>	BEWIT Betel Leaf
<b>Czech</b>	Pepřovník betelový esenciální olej
<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 heptene 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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