



medex

propolis
&
propolis
defense

NEW PRODUCTS IN LINE





Bee Propolis

Natural antibiotic & antiseptic

At Medex we have a wide range of propolis products, both **alcohol-** and **water-based**. Our propolis products also have a **standardised content of bioflavonoids**, the most important substance found in propolis.



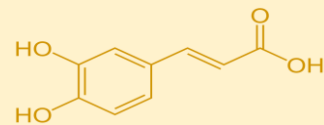
The word propolis comes from the Greek pro polis – meaning to **defend a city**. Propolis is definitely a beehive defender with **300+ beneficial compounds**. Bees use it to line the walls of their hives to keep the germs out. We use it to support our **immune systems**, **soothe scratchy throats**, and combat free radical damage in the body.



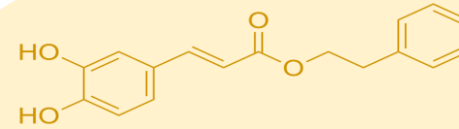
Bee Propolis

The most important substances in propolis

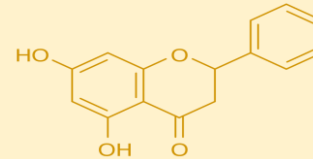
- FLAVONOIDS
 - Flavones¹
 - Flavonols²
 - Flavanones³
- PHENOLIC ACIDS⁴ AND THEIR ESTERS⁵
 - DI-/TRI-TERPENES⁶
- VOLATILE ORGANIC SUBSTANCES⁷ (ESSENTIAL OIL)
- **The anti-inflammatory, antimicrobial and anti-oxidative effect of propolis correlates with the content of flavonoids/polyphenols**



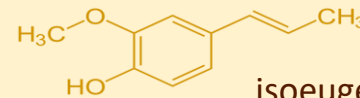
caffeic acid⁴



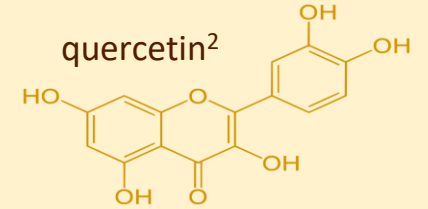
caffeic acid phenethyl ester (CAPE)⁵



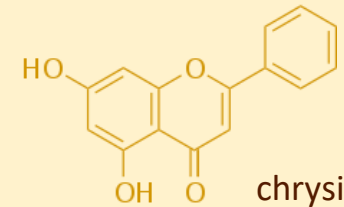
pinocembrin³



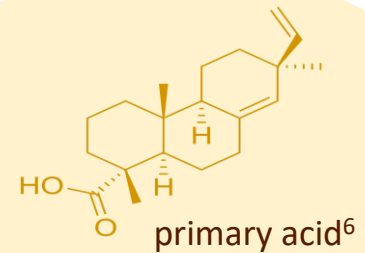
isoeugenol⁷



quercetin²



chrysin¹



primary acid⁶



PROPOLIS – LOWERING SYSTEMIC INFLAMMATION



Reduction of **inflammatory markers** (CRP, IL-6, TNF- α)



Reduction of **oxidative stress markers** (MDA, ROS)



Increase in endogenous **antioxidants** (glutathion, SOD, CAT)



Beneficial effect on the **lipid profile**

TABLE 2 Summary of clinical trials on anti-inflammatory effects of propolis

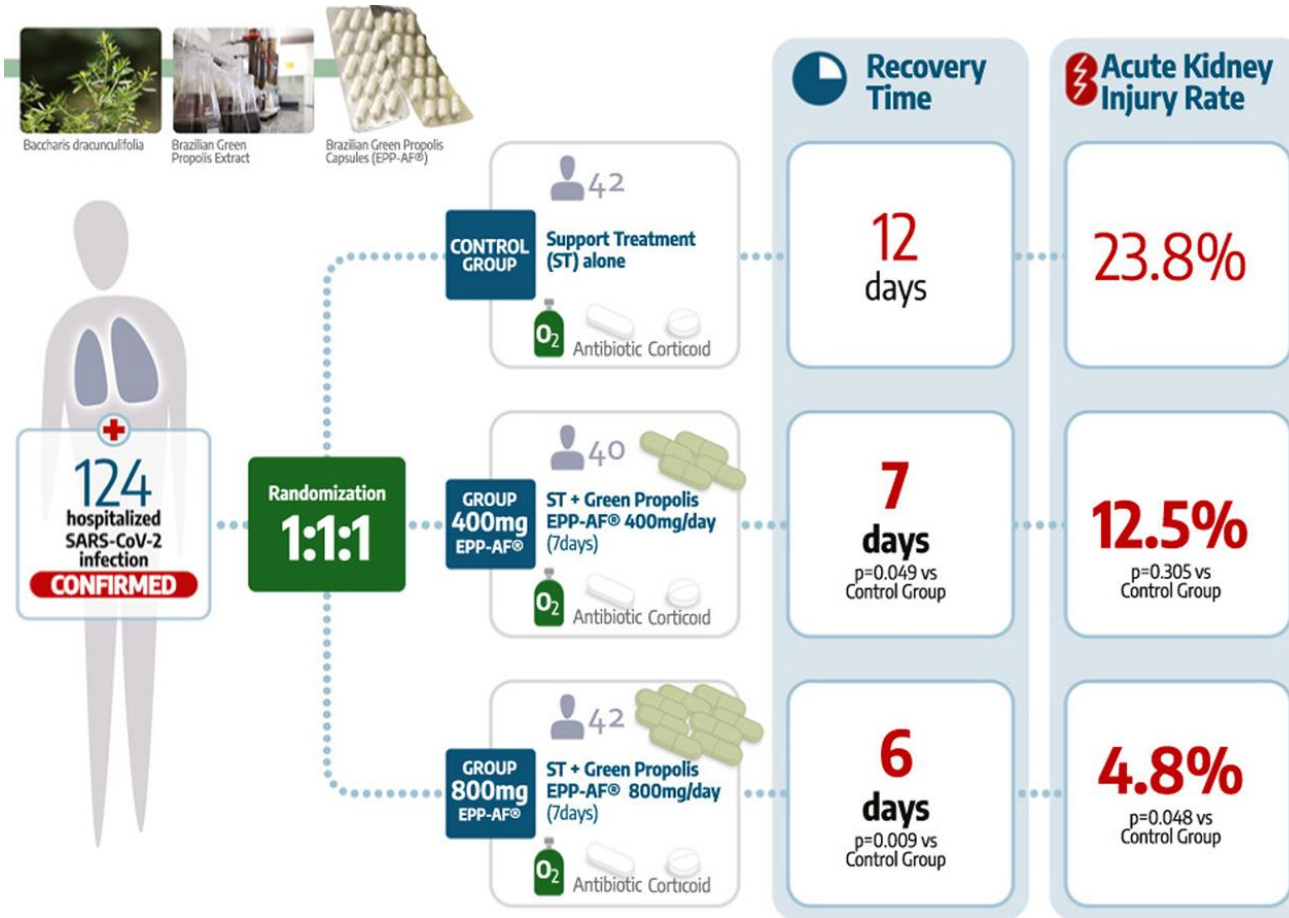
First author (year)	Country	Sample size (T/C)	Subjects	Type and dose of propolis	Duration (week)	Outcomes	Reference
Zhao et al. (2016)	China	32/33	T ₂ DM	900 mg/day	18	↓ TNF- α ↑ IL-6	Zhao et al. (2016)
Khayyal et al. (2002)	Egypt	22/24	Patients with mild-to-moderate asthma	2 ml/day	8	↓ TNF- α , IL-6, and IL-8 ↑ IL-10	Khayyal et al. (2002)
Fukuda et al. (2015)	Japan	41/39	T ₂ DM	226.8 mg/day	8	↔ CRP, ↔ TNF- α and IL-6	Fukuda et al. (2015)
Gao et al. (2018)	China	25/30	T ₂ DM	900 mg/day	18	↑ IL-6	Gao et al. (2018)
Mujica et al. (2017)	Chile	35/32	Healthy subjects	-	12	↔ CRP	Mujica et al. (2017)
Afsharpour et al. (2017)	Iran	30/30	T ₂ DM	1500 mg/day	8	↓ CRP and TNF- α	Afsharpour et al. (2017)
Zhu et al. (2018)	China	30/30	Elderly subjects	66 mg/day	96	↓ IL-6	Zhu et al. (2018)
Zakerkish et al. (2019)	Iran	50/44	T ₂ DM	1000 mg/day	12	↓ CRP and TNF- α ↔ IL-6	Zakerkish et al. (2019)
Gholaminejad et al. (2019)	Iran	29/28	Men with asthenozoospermia	1500 mg/day	10	↓ CRP and TNF- α	Gholaminejad et al. (2019)
Darvishi et al. (2020)	Iran	26/24	Patients with breast cancer	500 mg/day	12	↔ TNF- α	Darvishi et al. (2020)
Soleimani et al. (2021)	Iran	24/25	Healthy subjects	900 mg/day	4	↓ IL 6	Soleimani et al. (2021)

Abbreviations: ↑, Increase; ↓, decrease; ↔, no effect; C, control; CRP, C-reactive protein; IL, interleukin; T, treatment; T₂DM, type II diabetes mellitus; TNF- α , tumor necrosis factor-alpha.

Nattagh-EshTVani s sod., 2021, Food Science and Nutrition



PROPOLIS – LOWERING INFLAMMATION in COVID PATIENTS



400 mg of standardised alcoholic **propolis extract** (green propolis) a day (orally) **reduces hospitalisation time by ~50%** and **reduces the risk of kidney injury.**

(Berreta et al., 2020)



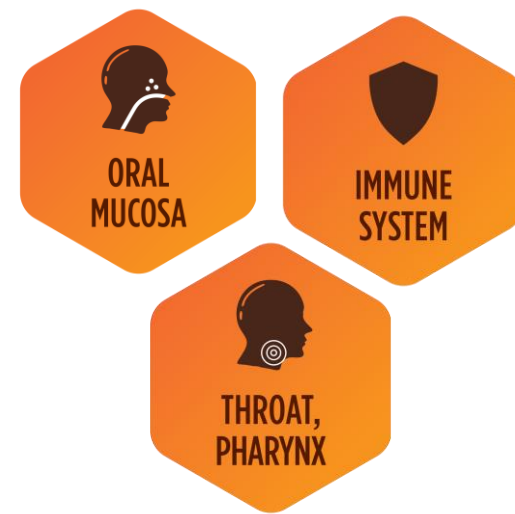
TRIALS – IMMUNE SYSTEM

• STIMULATING THE IMMUNE SYSTEM

- Propolis stimulates the immune system of bees themselves. Feeding with pollen mixed with propolis causes an increased secretion of antimicrobial peptides upon infection, which enables bees to more quickly and efficiently destroy harmful microbes (Turcatto et al., 2018)
- Prior feeding with propolis (0.5-1% in food, 4 weeks) increased the non-specific cellular immune response and decreased mortality (45-65%) in trout upon being exposed to harmful microorganisms (Choobkar 2016)
- Propolis increases the anti-inflammatory cellular response, and stimulates various immune cells which eliminate viruses and infected cells (macrophages, monocytes, natural killer cells)

• PROPOLIS AND COVID-19

- According to computer simulations, propolis flavonoids (quercetin and kaempferol) could block the SARS-CoV-2 coronavirus from attaching to and entering cells
- Inhibiting an excessive inflammatory response in cases of coronavirus infection, which causes complications, a severe progression of the disease and even death (Berreta et al., 2020)



THE MOST EFFECTIVE PROTECTION FOR THE THROAT AND PHARYNX



40% SHORTER SYMPTOM DURATION

Propolis is proven to **decrease the duration of symptoms** of infections of the **upper respiratory tract**, such as **sore throat** and **hoarseness**, by 40%.

Universal use of propolis:



THROAT,
PHARYNX



ORAL
MUCOSA



GASTROINTESTINAL
TRACT



TEETH,
GUMS



IMMUNE
SYSTEM



URINARY
TRACT



SYSTEMIC
INFLAMMATION





CLINICAL TRIALS – DISEASES OF THE ORAL CAVITY



- **MOUTH ULCERATION PREVENTION AND TREATMENT** (aphthous stomatitis)
 - Reduction of the number, size and frequency of aphthae, faster healing, reduced pain intensity and aphthae occurrence frequency (*Tonkaboni et al., 2016*)
- **PROPOLIS ADDED TO TOOTHPASTE FOR TEENAGERS WITH GUM INFLAMMATION** (gingivitis as a consequence of dental plaque)
 - After 20 days of brushing with added propolis, gum inflammation and the amount of dental plaque decreased significantly (*Peycheva et al., 2019*)
- **MOUTH-WASHING WITH A PROPOLIS SOLUTION IN CASE OF GUM INFLAMMATION**
 - After 28 days, gum inflammation and bleeding decreased significantly, much better in comparison with classic treatment with chlorhexidine (*Anauat-Netto et al., 2014*)
- **PERIODONTITIS PREVENTION AND TREATMENT**
 - Reduction of the depth of periodontal pockets (inflamed spaces between the gums and teeth, where the gums have receded due to inflammation) (*Nakao et al., 2020*)



GUM DISEASE DEVELOPMENT





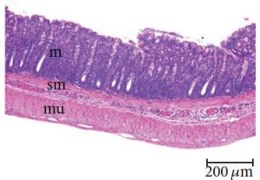
CLINICAL TRIALS – GASTROINTESTINAL TRACT



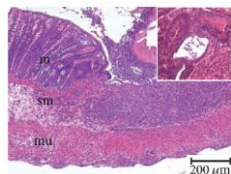
- **PROTECTION OF GASTRIC MUCOSA AND TREATMENT OF STOMACH ULCERS**
 - Preventing stomach injuries as a consequence of infection with *Helicobacter pylori* - antimicrobial, anti-oxidative and anti-inflammatory effect (Song et al., 2020)
 - Healing wounds in the gastric mucosa, caused by consuming various irritants (alcohol, certain medicines) or physiological stress (Ruiz-Hurtado et al., 2021)
- **PROTECTION OF THE INTESTINAL MUCOSA**
 - Reduction of inflammation and regeneration of the mucosa in chronic intestine inflammatory diseases (Hwang et al., 2020)
 - The effectiveness of propolis **in the treatment of gastrointestinal diseases** can be attributed to its antioxidant and anti-inflammatory properties. Several experimental studies show the beneficial effects of propolis in **the treatment of gastrointestinal diseases** (such as inflammation of the mucous membrane of the large intestine with accompanying symptoms, gastric ulcers). (Mota da Silva et al., 2018)
 - Propolis supplementation **may reduce the frequency of abdominal pain** in patients with irritable bowel syndrome. (Miryan et al., 2022)



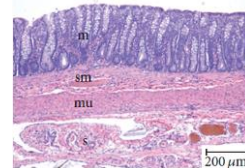
Normal intestinal



Inflamed mucosa due to exposure to chemical agents



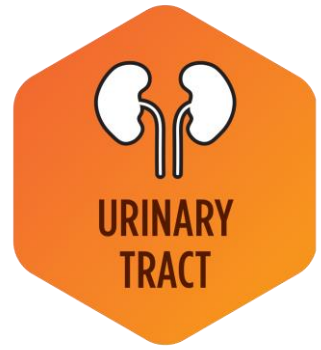
Mucosa regeneration in the presence of propolis



Gonçalves et al., 2013



CLINICAL TRIALS – URINARY TRACT



- **PREVENTION OF RECURRENT URINARY INFECTIONS/ADDITIONAL THERAPY**

- The addition of proanthocyanidins and propolis once a day provides certain protection against bacterial adhesion, bacterial reproduction and virulence in the urinary tract. (*Lavigne et al., 2011*)
- In a study, it was found that the addition of propolis to therapy increases the effectiveness of antibiotics used for urinary infections ("in vitro" study). (*Lavigne et al., 2020*)





MEDEX PROPOLIS LINES

propolis

propolis defense



ORIGINAL FORMULAS PROVEN BY TRADITION

PREVENTION AND SUPPORT

- **Original** propolis line from Medex
- Propolis **standardised to bioflavonoids**
- **Propolis-based food supplements with other added herbal extracts and/or vitamins**
- **Products:** liquid (drops, sprays, oral spray), effervescent tablets, bonbons, classic and **NEW** lozenges

NEW FORMULA OF THE STRONGEST PROPOLIS ON THE MARKET

PREVENTION AND ACUTE PROBLEMS

- **New** propolis line from Medex
- Propolis **standardised to bioflavonoids with APF® factor** - **ACTIVE PROPOLIS FLAVONOIDS** □ defining the intensity/concentration of a product with propolis
 - Double (or even triple) standardisation (raw material + final product)
 - Concentration and doses adapted to clinical trials
- **Purified** propolis sprays/tinctures **with added honey and essential oils**
- **Products:** spray, tincture, **NEW** capsules

APF® 50 □
Propolis
flavonoids
50 mg/ml

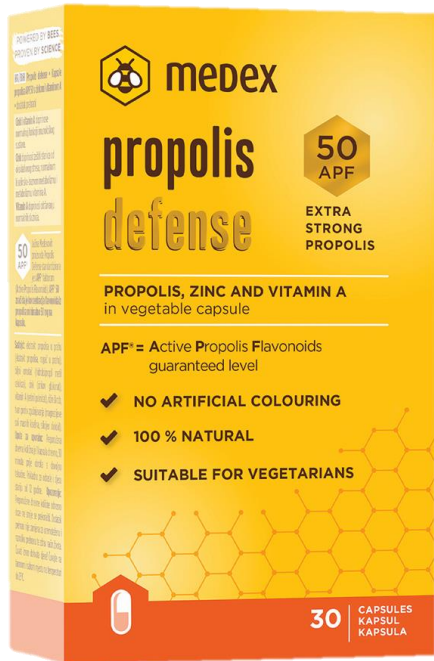
Both lines are made with **natural ingredients** with **no preservatives, artificial colourings or flavours**



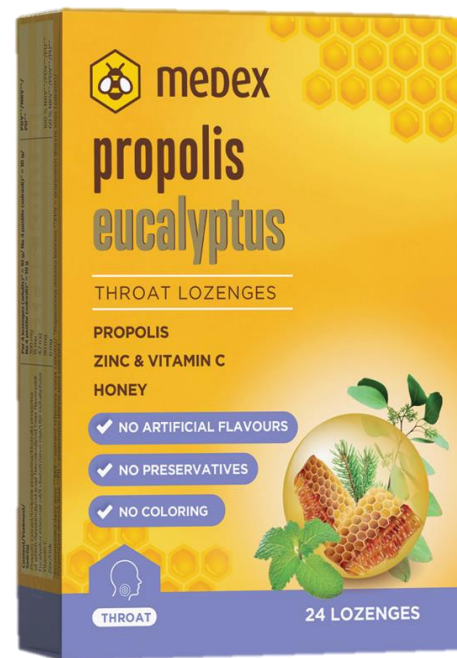
NEW PRODUCTS IN THE MEDEX PROPOLIS LINE

propolis defense

propolis



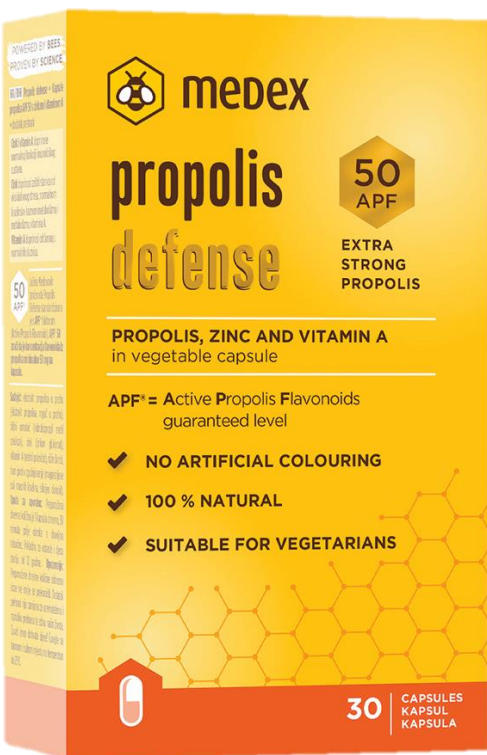
Capsules



Lozenges



NEW propolis defense



50 APF®

The minimum concentration of propolis flavonoids is 50 mg/capsule

PROPOLIS APF® 50 CAPSULES WITH ZINC AND VITAMIN A

Propolis Defense capsules are used preventively, in order to prevent gastric and intestinal mucosa inflammations.

APITHERAPISTS RECOMMEND THE USE OF CAPSULES:

For everyone 12+ who is experiencing **problems in the digestive tract, urinary tract problems, chronic problems in the internal organs** (chronic diseases of the stomach, intestines)

With added **relevant vitamins** for supporting a **healthy mucosa** and **immune system** (for enhanced effect):

- **Zinc** and **vitamin A** contribute to the functioning of the immune system.
- **Zinc** contributes to the protection of cells from oxidative stress and to the metabolism of acids, bases and **vitamin A**.
- **Vitamin A** contributes to maintaining a healthy mucosa

We added zinc since it also affects the metabolism of vitamin A that is necessary for maintaining a healthy mucosa of the digestive and urinary tracts

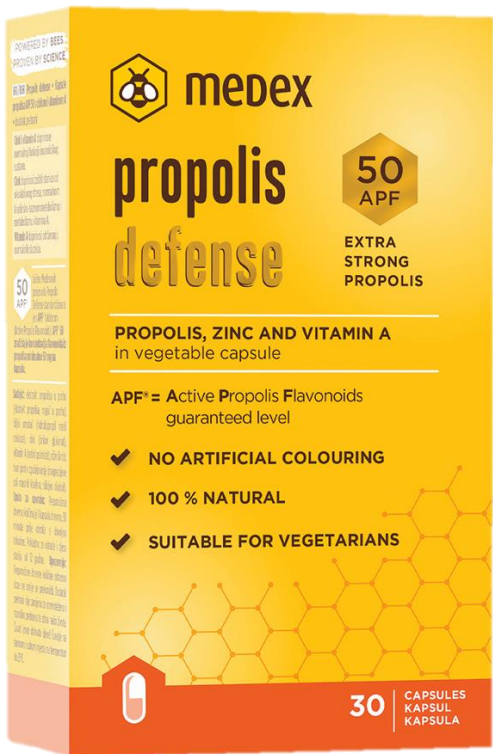




NEW propolis defense

PROPOLIS APF® 50 CAPSULES WITH ZINC AND VITAMIN A

Use propolis Defense capsules in order to maintain:



GASTROINTESTINAL TRACT



URINARY TRACT

MUCOSA OF THE DIGESTIVE TRACT



BY CONSUMING

1 capsule daily, 30 min before a meal, for at least one month, then take a 14-day break. **Repeat several times a year.**



IMMUNE SYSTEM

IMMUNE SYSTEM



BY CONSUMING

1 capsule daily, 30 min before a meal, for at least one month, then take a 14-day break, **in the colder period of the year.**



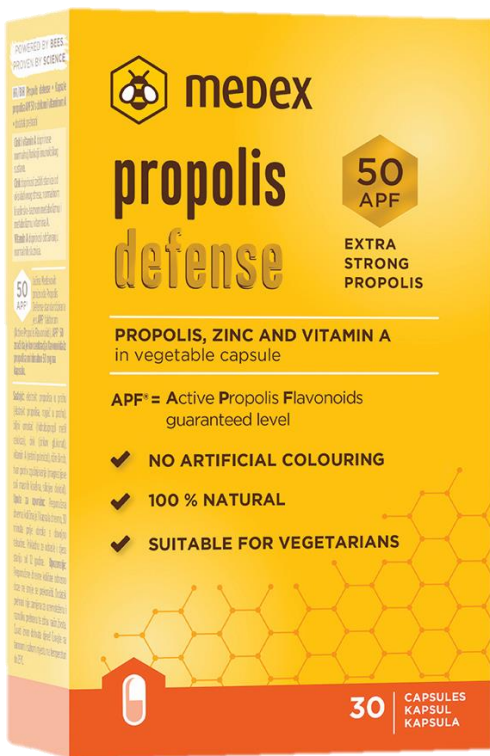
50 APF®

The minimum concentration of propolis flavonoids is 50 mg/capsule



NEW propolis defense

PROPOLIS APF® 50 CAPSULES WITH ZINC AND VITAMIN A



50 APF®

The minimum concentration of propolis flavonoids is 50 mg/capsule

WHY CHOOSE PROPOLIS DEFENSE CAPSULES?

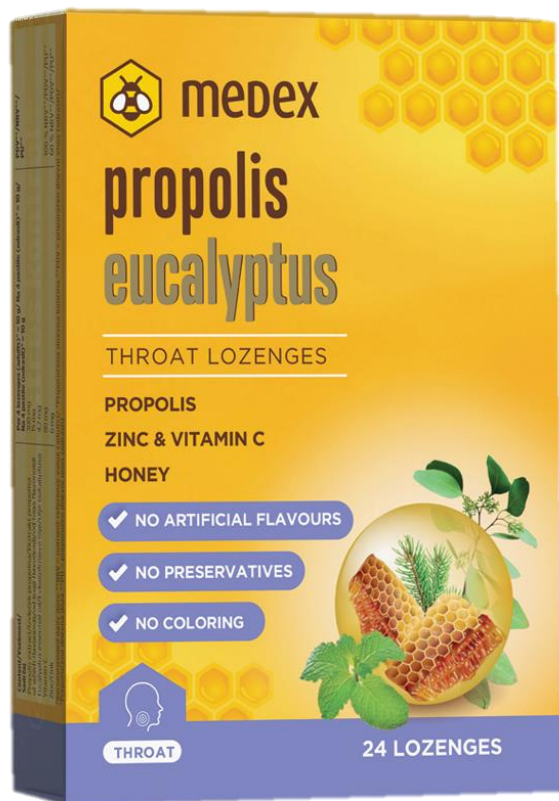
- ✓ Standardised raw material and finished product
- ✓ Minimum 50 mg of bioflavonoids/capsule
- ✓ The recommended daily dose is only 1 capsule/day
- ✓ Without flavourings and colourings
- ✓ Suitable for vegetarians
- ✓ The only* capsules on the market with a combination of propolis, zinc and vitamin A for action in the gastrointestinal tract.

*According to our market research.





NEW propolis LOZENGES



For adults and children from 6 years

1 lozenge 4 times a day for adults and 3 times a day for children.

PROPOLIS EUCALYPTUS LOZENGES

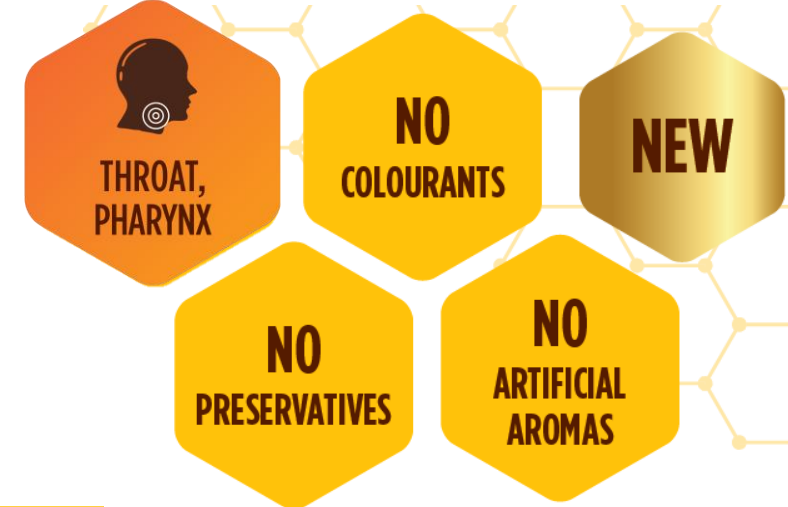
- **Honey** throat lozenges with **propolis, zinc, vitamin C and eucalyptus**

The lozenges have a soothing effect on the throat and support the normal function of the respiratory system.

With added **relevant ingredients** for supporting **respiratory system** and **immune system** for enhanced effect:

- **Eucalyptus oil** for supporting the respiratory and immune systems
- **Vitamin C** and **zinc** contribute to the normal functioning of the immune system and to the protection of cells from oxidative stress.

Honey supports respiratory function and gives excellent taste





NEW propolis LOZENGES



For adults and children from 6 years

1 lozenge 4 times a day adults and 3 times a day children.

PROPOLIS GINGER LOZENGES

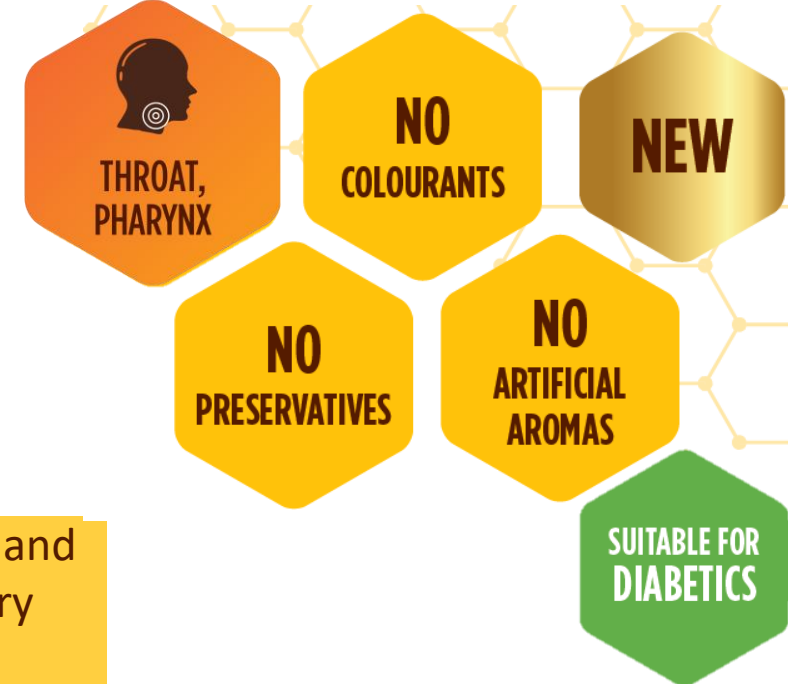
- Throat lozenges with **propolis, zinc, vitamin C** and **ginger**, with **lemon** and **menthol** flavour, with sweeteners, **suitable for diabetics**

The lozenges have a soothing effect on the throat and support the normal functioning of the respiratory system.

With added **relevant ingredients** for supporting the **respiratory and immune systems** for enhanced effect:

- **Ginger** supports the normal functioning of the respiratory system.
- **Vitamin C** and **zinc** contribute to the normal functioning of the immune system and to the protection of cells from oxidative stress.

Sugar-free formula also suitable a **for diabetics**





medex

**propolis
&
propolis
defense**

**Other propolis
products in the
portfolio**





Other propolis products in the portfolio

propolis

propolis defense

- ✓ NO PROPYLENE GLYCOL
- ✓ NO POLYETHYLENE GLYCOL
- ✓ NO PRESERVATIVES
- ✓ 100% NATURAL
- ✓ LIQUID



5 mg /ml*
of bioflavonoids
per 1 ml (1 mg
from propolis)

PROPOLIS ORAL
WATER-BASED

PREVENTION AND SUPPORT

ADDED:

- Honey
- Niacin
- Sage
- Echinacea

5 mg /ml*
of bioflavonoids
per 1 ml (1 mg
from propolis)

PROPOLIS ORAL JUNIOR
WATER-BASED

PREVENTION AND SUPPORT

ADDED:

- Honey
- Niacin
- Sage
- Spruce tips

10
APF®**

PROPOLIS DEFENSE
WATER-BASED SPRAY

**PREVENTION AND ACUTE
CONDITIONS**

ADDED:

- Honey
- Peppermint

30
APF®**

PROPOLIS DEFENSE
WATER SOLUTION

**PREVENTION AND ACUTE
CONDITIONS**

* Bioflavonoids per ml; (1 ml from propolis)

**Bioflavonoids from propolis per ml; Active propolis flavonoids (APF®)





Other propolis products in portfolio

- ✓ NO PROPYLENE GLYCOL
- ✓ NO POLYETHYLENE GLYCOL
- ✓ NO PRESERVATIVES
- ✓ 100% NATURAL
- ✓ LIQUID

WATER BASE

GUARANTEED
FROM MEDEX
QUALITY

VERSATILE PROPOLIS

since 1954

Powered by bees.
Proven by science.

	<p>Propolis Oral Junior, water-based, spray with an applicator</p>	<p>Propolis Oral, water-based, spray with an applicator</p>	<p>BIO Propolis defense, water-based APF[®] 10, spray</p>	<p>Propolis defense, water-based APF[®] 30, with dropper</p>
SORE THROAT AND PHARYNX	✓ CHILDREN	✓	✓✓	✓✓
GUM/ORAL MUCOSA INFLAMMATION, APHTHAE	✓ CHILDREN	✓	✓✓	✓✓
PREVENTIVE CARE FOR THE ORAL CAVITY <small>(preventing gum inflammation, oral mucosa, throat and pharynx infection, aphthae, caries formation)</small>	✓	✓	✓	✓
TO STRENGTHEN THE IMMUNE SYSTEM	✗	✗	✗	✓✓
FOR A HEALTHY MUCOSA OF THE GASTRO-INTESTINAL TRACT	✗	✗	✗	✓✓
SUPERFICIAL WOUNDS, SKIN INFLAMMATION	✗	✗	✗	✓
FLAVONOIDS (min. mg/ml)	5 mg/ml*	5 mg/ml*	10 mg/ml**	30 mg/ml**
	SPRAYS			
				SOLUTIONS

* Bioflavonoids per ml; (1 ml from propolis)
 ** bioflavonoids from propolis per ml; Active propolis flavonoids (APF[®])





Other propolis products in the portfolio



Other



Amazing
taste



propolis forte

Lozenges

PREVENTS AND SOOTHES THROAT INFLAMMATION

- propolis **on the go** – dry form of propolis with **vitamins A and C**
- suitable for **adults and children**

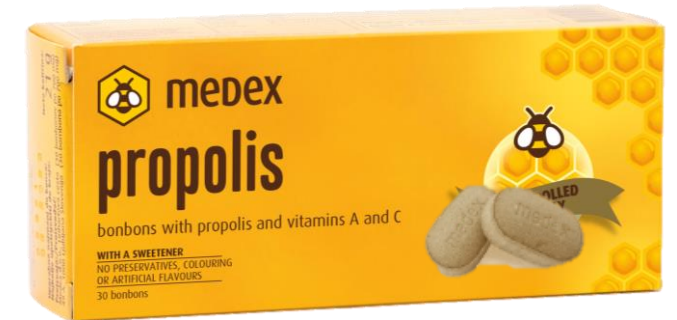


propolis C+Zn

Effervescent tablets

HYDRATING ORANGE FLAVOUR DRINK FOR THE IMMUNE SYSTEM

- effervescent tablets with **propolis, vitamin C and zinc**
- suitable for **adults** and teens from **14 years**



propolis

Bonbons

PREVENTS MOUTH MUCOUS AND HEALS SORE THROATS

- propolis with vitamin A, C and sweetener in a bonbon
- formulation extends duration of action
- suitable for **adults and children**



LET'S
BEE
DIFFERENT
TOGETHER

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