

Dietary supplement

SunVital®

DuoLife NATURAL KIDS FORMULA SUNVITAL® is a 100% natural dietary supplement for children over 6 years of age, composed on the basis of natural vitamins, minerals and antioxidants from plant materials, with the addition of organic zinc to support the proper functioning of the immune system and respiratory tract of the young organism. Standardized, highest quality plant ingredients and a proprietary formula of health-supporting yeast promote the mobilization of immune mechanisms, both in the course of infection and during the period of increased susceptibility to disease.



When?

The child's immune system develops and works intensively, learning to deal with common pathogens. Unfortunately, this means that our children are usually sick more often than adults, whose „memory“ of the immune system is already well developed and allows them to fight the threat quickly and effectively. The optimal functioning of the child's respiratory tract and immune system is greatly influenced by a proper diet, but in a situation of increased susceptibility to infections, for example due to the autumn-winter season or intensive sports, additional supplementation may be advisable. The use of the preparation is also recommended in order to help the young organism fight against already existing viral and bacterial infections of the upper and lower respiratory tract, as well as in those toddlers in whom these infections often recur.

How?

The plant ingredients contained in SUNVITAL® NATURAL KIDS FORMULA provide children with natural vitamins, minerals and antioxidants, complementing the often limited diet of our fussy eaters. The supplementation supports the work of the immune system and respiratory tract, helps maintain proper functions of the intestinal bacterial microflora and promotes antioxidant processes. As a result, it contributes to reducing the risk of infection in the child, and during the disease, it supports the alleviation of symptoms, allowing for an easier course of the disease.

i DuoLife SUNVITAL® NATURAL KIDS FORMULA – usage:

5 ml once per day, after the meal, preferably diluted with water. During a period of increased demand (reduced immunity, infections) 5 ml twice a day, after a meal. Syrup for children over 6 years old.

i Ingredients: red grape fruit concentrated juice, blackberry juice concentrate, rosehip juice, honey, elderberry fruit extract (*Sambucus nigra*) standardized for polyphenols (including anthocyanidins) 10:1, acerola fruit extract (*Malpighia glabra*) standardized for vitamin C 50:1 content, SunVital® (proprietary formula obtained from inactivated yeast cells of *Saccharomyces cerevisiae*) / organic zinc), African pelargonium root extract (*Pelargonium sidoides*) 4:1, pumpkin seed extract (*Cucurbita pepo*) 4:1, garlic extract (*Allium sativum*) 4:1, leaf extract of Phoenix pansies (*Andrographis paniculata*) 4:1.

Do not exceed the recommended daily dose. The product should not be used as a substitute for a varied diet. Balanced diet and a healthy lifestyle are the basis for proper functioning of human body.

Ingredients	5 ml	10 ml
Elderberry fruit extract (<i>Sambucus nigra</i>)	760 mg	1520 mg
Acerola fruit extract (<i>Malpighia glabra</i>)	125 mg	250 mg
SunVital® (proprietary formula obtained from inactivated yeast cells of <i>Saccharomyces cerevisiae</i>)	100 mg	200 mg
Organic zinc	5 mg (50% NRV*)	10 mg (100% NRV*)
African pelargonium extract (<i>Pelargonium sidoides</i>)	7,5 mg	15 mg
Pumpkin seed extract (<i>Cucurbita pepo</i>)	3,75 mg	7,5 mg
Garlic extract (<i>Allium sativum</i>)	2,25 mg	4,5 mg
Andrographis leaves extract (<i>Andrographis paniculata</i>)	40 µg	80 µg

*NRV – reference daily intake for an average adult (8400 kJ/2000 kcal)

i The herbal extracts contained in the preparation have **10:1, 50:1, 4:1 ratios written next to their names - this is the so-called DER - what does it mean?**

DER (drug extract ratio) specifies a number of milligrams of plant material used to obtain one milligram of the extract.

If 5 ml of the preparation contains 760 milligrams of elderberry (or other extract) DER 10:1, this means that 7600 milligrams (7.6 grams) of raw material are used to obtain one portion (5 ml) of the product.

Did you know that acerola and dog rose fruits contain about a dozen or even several dozen more vitamin C than lemons and oranges?

Dog rose is a fruit with an extraordinary content of vitamin C; 100 g of fresh fruit supplies as much as 680-1200 mg¹. In comparison, lemons and oranges contain only 50-60 mg of vitamin C in 100 g of fruit². Vitamin C is necessary, for example, for the normal functioning of the immune system; it can shorten the duration of an infection and alleviate its course. Furthermore, it is a powerful antioxidant (protects cells against free radicals and oxidative stress)¹⁻³. Natural vitamin C, found in wild rose fruit, is perfectly absorbed by the human body and 3 to 5 times more active than its synthetic counterpart. It is also more effective, as it reaches the required levels in the body faster and maintains them for longer. In the natural environment, vitamin C occurs together with a „biological background“ which has a stabilizing and synergistic effect⁴⁻⁶.

Acerola fruit contains an even higher dose of vitamin C; in 100 g of fresh fruit weight there is as much as 1000-4500 mg of it! Moreover, acerola is rich in many other compounds with antioxidant properties (anthocyanins, carotenoids), scavenging free radicals, protecting immune system cells and supporting the body's defence functions^{7,8}.

Red grape and blackberry juices, elderberry extract and honey are a wealth of health-supporting polyphenolic antioxidants.

- ▶ Antioxidant compounds (anthocyanins, resveratrol) contained in red grapes have an effect on the body's overall immunity, helping protect against infections and inflammation. They also have a direct protective effect on cells of the immune system, protecting them against the destructive effect of free radicals and

oxidative stress. In addition, they also support the body's purification processes by binding toxic elements such as lead and helping remove them from the body^{9,10}.

- ▶ Blackberries are a wealth of polyphenol antioxidants, mainly anthocyanins and flavonols, scavenging free radicals and chelating metals. They can therefore support the body's fight against inflammation and infections, support the functioning of the immune system and the body's purification processes⁶. Blackberry juice also supports the functioning of the respiratory tract in case of infections and expectoration problems; also, blackberries soothe throat and vocal cords irritation^{11,12}.
- ▶ Polyphenols (anthocyanins/anthocyanidins) contained in elderberries have a sudorific, diuretic, expectorant, antiviral and antibacterial, immunostimulating, antioxidant and detoxifying effect. They support the body's fight against infections, especially viral ones, and inflammatory conditions. Elder also supports the functions of the airways, relieving irritation of the throat, larynx and vocal cords, as well as symptoms of cold, coughing and hoarseness^{12,13}.
- ▶ Honey provides the body with valuable energy, structural and regulatory ingredients that improve the body condition. Honey additive improves assimilation of mineral and vitamin ingredients contained in the product. Honey has many health-supporting effects, including a strong antioxidant effect, antimicrobial properties and a sudorific effect, supporting the fight against increased body temperature, soothing coughing and facilitating expectoration¹⁴⁻¹⁶.

What does the SunVital® proprietary formula contain and how does it work?

The formula contained in the preparation with increased and standardized content of natural organic zinc is obtained in the process of fermentation and then inactivation of special lines of *Saccharomyces cerevisiae* yeast. Yeast - a natural wealth of many vitamins and minerals, is cultured and additionally nourished, and then processed and dried under mild conditions, which allows the interaction of preserved vitamins and minerals with the natural yeast matrix, which is their „biological background“ and guarantees their durability and quality. The resulting final product contains a complex of natural, perfectly digestible nutrients, with a specific, standardized amount of organic zinc.

Zinc is one of the main microelements of the body, whereas the supply of zinc in food products is generally insufficient; even one in three people in the world may have a deficiency of this element, making its supplementation, especially during the period of susceptibility to infection, advisable. Zinc contributes to maintaining systemic homeostasis, is involved in the body's immune processes, minimizes the toxic effects of heavy metals on the functions of systems and organs, protects the retina of the eye, contributing to maintaining good eyesight. Zinc is also a valuable antioxidant protecting cells against oxidative stress. Of all the trace metals that are essential for man, only iron plays a more important role than zinc^{17,18}.

African geranium, pumpkin seeds, garlic and green chireta are plants with documented antimicrobial activity.

- ▶ African geranium has an antiviral and antibacterial effect, also against „child“ bacterial strains; it has a clinically proven effect supporting the treatment of bronchial, pharyngeal, bacterial and viral infections of the nasal sinuses and nasal mucosa, colds; it contributes to shortening the duration of the infection and alleviating its symptoms. The material also has an immunostimulating effect and increases the body resistance to infections in people training sports^{19,20}.
- ▶ Pumpkin seeds contain oil with antioxidant properties - protecting cells from the destructive influence of free oxygen radicals; moreover, the material may contribute to the alleviation of inflammation and fight against bacteria causing respiratory infections²¹.
- ▶ Garlic is a wealth of antioxidant compounds, it also contains vitamins (C and a group of B vitamins), minerals (phosphorus and potassium), sulphur derivatives (including allicin with antibacterial effect)²². This plant is also a source of inulin, a polysaccharide of prebiotic properties stimulating growth of intestinal microflora²³. So far, hundreds of scientific papers have been published on the health-supporting effects of garlic. The effects are antioxidant, antimicrobial (against viruses, fungi and bacteria), hepatoprotective, supporting the functions of the immune system; the immunostimulating effect of garlic has also been proven, making it used as an aid in the prevention of influenza and colds^{24,25}. The plant shows synergistic effects with antibiotics, supporting their antibacterial action²⁶.
- ▶ Green chireta is used as an aid in the treatment of influenza, colds, sore throat inflammation and other respira-

tory tract infections, due to its both antibacterial and antiviral properties. Moreover, it shows immunostimulating, detoxifying and hepatoprotective effects, supporting the fight against inflammation and increased body temperature. The plant owes its health-supporting properties mainly to polyphenolic compounds (flavonoids) and diterpenes - andrographolids contained in the raw material^{27,28}.

What makes DuoLife SUNVITAL® NATURAL KIDS FORMULA different?

- ▶ **The liquid form of the preparation with the preserved biological background of the components**, facilitating the release of active compounds and their absorption into the bloodstream, as well as increased absorption, translate into more efficient distribution to the place of action (beneficial effect on LADME processes*).
- ▶ **The product is preserved using IHHP™ by DuoLife** – (Innovation High Hydrostatic Process™ by DuoLife), a method based on the concept of „minimal processing“. The advantage of the method is high health quality, durability and preservation of the natural nutritional and sensory qualities, compared to products preserved by classical methods. The technological process employed is conducted at a low temperature (to protect active ingredients) and is based on the principle of synergy of multiple fixatives, allowing to maintain the highest quality of the product without using preservatives.
- ▶ **100% natural ingredients and 100% of their content in the preparation**; including organic zinc from inactivated yeast and plant extracts providing vitamins, minerals and natural antioxidants.
- ▶ **Formulation prepared in consideration of the principles of synergy and antagonism.**
- ▶ **The product DOES NOT CONTAIN preservatives and is GMO FREE** - the raw materials used to develop the supplement ARE NOT DERIVED from genetically modified plants.
- ▶ **The product is GLUTEN-FREE** - can be used by people with gluten intolerance.
- ▶ **Special bottle from pharmaceutical-grade glass** - the dark glass protects against light and temperature fluctuations, and is resistant to release to the formulation of mineral substances from its inner surface.
- ▶ **Concentrated form** – easy to use.

i *The references for DuoLife Natural Kids Formula SunVital® can be found on a separate binder sheet.*

*LADME – is an English abbreviation describing processes to which an active substance is subjected in the body: release from the preparation form -> absorption into a bloodstream -> distribution in the body -> metabolism -> excretion

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