

Vitamin B12 Complex

Cod. FE0916 – 90 vegetable capsules



Vitamin B12 Complex is a food supplement based on methylcobalamin, the most bioavailable form of vitamin B12, formulated with other cofactors to ensure maximum absorption.

HEALTH CLAIMS (EU Regulation 432/2012): *Vitamin B12 contributes to normal energy metabolism, normal nervous system function, normal homocysteine metabolism, normal psychological function, normal red blood cell formation, normal immune system function, helps reduce tiredness and fatigue and contributes to the process of cell division.*

Ingredients: Red beet root (*Beta vulgaris*), bulking agent (microcrystalline cellulose), lapacho/pau d'arco bark (*T. Avellanedae* / *T. heptaphylla*), dandelion root extract (*Taraxacum officinale*), methylcobalamin (vit. B12), anticaking agents (magnesium salts of fatty acids and silicon dioxide), plant digestive enzymes, vegetable capsule (glazing agent: hydroxypropylmethylcellulose; purified water).

Nutritional information

1 capsule (644 mg)

Vitamin B12 (methylcobalamin)	1 000 µg (40 000%*)
Red beet (<i>Beta vulgaris</i>)	374 mg
Lapacho/Pau d'arco (<i>T. avellanedae</i> / <i>T. heptaphylla</i>)	50 mg
Dandelion (<i>Taraxacum officinale</i>)	40 mg
Plant digestive enzymes:	3,87 mg
<i>alpha</i> -amylase 157,5 FCC DU, bromelain 9 600 FCC PU, cellulase 16,8 FCC CU, dipeptidyl-peptidase IV 27,33 FCC HUT, <i>alpha</i> -galactosidase 0,2533 FCC GalU, glucoamylase 0,666 FCC AGU, hemicellulase 0,453 FCC HCU, invertase 1,05 FCC INVU, lactase 7,253 FCC ALU, lipase 40 FCC LU, maltase 1,73 FCC DP, papain 4.000 FCC PU, pectinase 0,8 FCC endo-PGU, phytase 0,0333 FCC FTU, fungal protease 552,5 FCC HUT, acid protease 0,76 FCC SAP, neutral protease 60 FCC HUT.	

*NRV: Nutrient Reference Value in %

Size and format:

90 vegetable capsules

Recommended daily dose:

1 capsule daily with food.

Do not exceed the stated recommended daily dose.

Indications and uses:

- Vegetarian or vegan diets.
- Prevention or treatment of anaemia, for good digestion, nutrient absorption, protein synthesis and carbohydrate and fat metabolism.
- It increases energy and keeps nerve cells in good condition.
- It helps to relieve symptoms of fatigue, nervous irritability, inability to concentrate, slight memory loss, depression, insomnia, lack of balance and coordination.
- It is important in periods of reproduction and lactation.

DETAILS:

Vitamin B12 is a water-soluble vitamin. It is essential for normal growth and development, and it is very important in the process of red blood cell formation. It helps the body to use folic acid and supports the function of the nervous system.

Its deficiency may be caused by malabsorption. The presence of hydrochloric acid and a well-functioning thyroid gland facilitate the absorption of vitamin B12.

Vitamin B12 absorption appears to decrease with age and also due to calcium, iron and vitamin B6 deficiencies.

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INGREDIENTS:

VITAMIN B12: Vitamin B12 is the largest and most complex of the vitamins. Vitamin B12 comprises the only cobalt-containing molecules (called cobalamins) with biological activity in humans ⁽¹⁾. Clear health benefits of dietary vitamin B12 intake have been confirmed, as it contributes to normal red blood cell formation, cell division, energy metabolism and immune system function ^(2,3).

Humans are not capable of producing vitamin B12. It is found exclusively in animal products such as meat (offal) and to a lesser extent in fish, poultry and dairy products, which is why vegetarians and vegans are at a higher risk of developing a deficiency of this vitamin ⁽⁴⁾.

The absorption of this vitamin may be partly through the oral epithelium, but the most important phase of absorption takes place in the stomach. There, stomach acids unbind vitamin B12 from the proteins in the food. Vitamin B12 then binds to intrinsic factor (IF) in the small intestine. IF protects the stomach wall from degradation and facilitates transport through the wall of the small intestine. The stomach wall of older people produces less IF and they are therefore at greater risk of vitamin B12 deficiency ^(5,6).

A sufficient intake of vitamin B12 is important as it helps the body convert food into glucose, which is used to produce energy, maintain healthy nerve cells, produce nucleic acids (e.g. DNA), regulate the formation of red blood cells together with vitamin B9 (folate) and control, together with vitamin B6 and vitamin B9, the level of homocysteine in blood, a potential risk indicator for heart disease ⁽⁷⁻¹¹⁾.

Mild vitamin B12 deficiency is not unusual in older people (10-15% of those over 60), either because of a poor diet or because they have less gastric acid, which is necessary for the body to absorb vitamin B12 ⁽¹²⁾. Low B12 levels can cause a range of symptoms including fatigue, breathing difficulties, diarrhoea, nervousness, numbness or tingling sensation in the fingers and toes. A serious B12 deficiency causes neurological damage ⁽¹²⁻¹⁶⁾.

RED BEETROOT: It contains nitrates that improve endurance during physical exercise ⁽¹⁷⁻²⁰⁾, reduce blood pressure and systemic inflammation ⁽²¹⁾. There is currently great interest in the anti-cancer effect of betalains in beetroot due to their antioxidant properties ⁽²²⁾.

LAPACHO-PAU D'ARCO: it contains several compounds with antifungal, antibacterial and antiparasitic activity such as lapachol, xyloidone and naphthoquinones ^(22,23). In vitro studies show a clear and potent inhibition of free radicals and inflammatory substances (e.g. leukotrienes) by Pau d'Arco substances. It can be useful in inflammatory diseases such as arthritis, psoriasis, dermatitis, etc. ⁽²⁴⁻²⁸⁾. It is also known for its immune ^(29,30) boosting and anti-tumour properties ⁽³¹⁻³⁴⁾.

DANDELION: its root contains bitter active principles which are responsible for stimulating digestion and appetite through salivary and gastric juices secretion. The root is traditionally considered choleric (increases bile production) and cholagogic (increases bile secretion) and is therefore recommended for use in certain gallbladder disorders. It also has a detoxifying action by providing support for liver function as a liver tonic and has, therefore, been used as a background treatment for skin conditions. In relation to liver health, studies have shown benefits for hepatitis and other liver diseases, as well as a positive effect on blood cholesterol, probably due to the role of the liver in fat metabolism ⁽³⁵⁻³⁸⁾.

Commission E and other monographs also attribute a diuretic action to this plant, and therefore, it has been used in certain conditions where increased diuresis is required ^(39,40). Some studies also associate this plant with a mild hypoglycaemic action due to the presence of inulin and sesquiterpene lactones in the plant. Other activities, such as anti-inflammatory and immunomodulatory activities due to the phenylpropanoid and polysaccharide content respectively, have been reported in the literature ⁽³⁵⁻³⁸⁾.

VEGETAL ENZYMES: they effectively stimulate the digestion of proteins, carbohydrates, fats and other nutrients, supporting digestive processes. Enzymes are found in all animals and plants and are essential for maintaining the proper functioning of the body. Digestive enzymes are one of the three major groups of enzymes that our bodies need to function and are specifically involved in the process of digestion. Our digestive system produces the digestive enzymes needed to break down food into smaller particles, which can be absorbed and used by the body. If enzyme production is deficient, the digestive process is not complete and can lead to digestive discomfort such as heaviness,

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bloating, flatulence and heartburn, as well as food allergies. Enzyme production is reduced by inadequate diet, stress, disease or simply age⁽⁴¹⁻⁴⁵⁾.

Proteases break down proteins in general. Papain is a proteolytic enzyme that digests inert proteins and improves digestion⁽⁴⁶⁾. Bromelain not only metabolises proteins, but also keeps blood vessels in good condition and has anti-inflammatory effects. Inadequate protein digestion can lead to various health problems⁽⁴⁵⁾. The enzymes amylase, maltase and invertase break down carbohydrates. Maltase breaks down especially malt, cereals and simple sugars and the invertase enzyme breaks down especially sucrose. Lactase helps digesting dairy products. Cellulase and hemicellulase ease the digestion of fibre found in fruits and vegetables. Lipase breaks down fat. Phytase is important for mineral absorption. *Alpha*-galactosidase helps to break down the oligosaccharides present especially in legumes. Pectinase breaks down the pectin found in many fruits and vegetables. Glucoamylase breaks down carbohydrates and especially converts polysaccharides into glucose⁽⁴⁴⁾.

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