

NattoZYM^{plus}

Nattokinase 6.000 FU*
plus Dandelion extracts

With synergistic effect between
natural enzyme and plant compounds

Dietary supplement



To support the body in self-cleansing in vessels and tissues, immune support, stimulate liver and excretion via the urinary tract

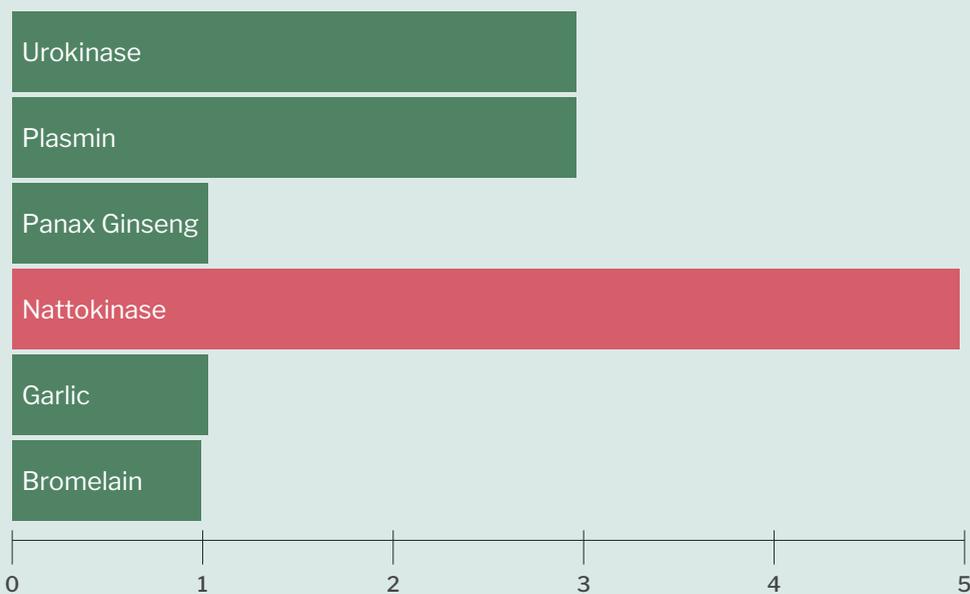
Nattokinase is a protein-cleaving enzyme that scientists first discovered in 1987 in a vegetarian cheese called Natto, fermented from soybeans with the help of *Bacillus subtilis*. Hence the enzyme is called analogously to the bacterium: *Subtilisin*. So once again, bacteria are doing a great job here and are not just "bad bugs", as they like to be portrayed in the conventional medical narrative. Natto is fermented from boiled or steamed soybeans and is a plant-based cheese that has been served as a traditional Japanese food for thousands of years. The enzyme nattokinase is extracted from natto and no longer contains soy itself. It is therefore an enzyme expressed and purified with the help of bacteria, which therefore no longer has any soy properties and therefore also no longer contains its allergens.¹

Japan's people have always been characterized by their cardiovascular health. Part of this phenomenon has been attributed to the consumption of Natto, which therefore has generated a great deal of research interest. Accordingly, after its discovery, the enzyme made a rapid career, initially in the field of nutritional medicine research in Asia, but then also in the West. There are now more than 200 studies showing that nattokinase is an extremely versatile enzyme with numerous beneficial properties and plays a key role in our cardiovascular health. When ingested orally, it penetrates the wall of the small intestine and gets directly into the bloodstream, where it develops a systemic enzyme effect, i. e. it acts in the entire organism. There, as a fibrinolytic enzyme, it contributes to the cleavage of unwanted cell components containing fibrin and is involved in many important metabolic processes. This systemic aspect distinguishes nattokinase significantly from digestive enzymes such as the protein-digesting enzymes pepsin acting in the stomach or trypsin acting in the small intestine, or amylase, which is aimed at digesting starch.²



Natto – the fermented vegetarian cheese from Japan

Relative fibrinolytic activity of endogenous or natural substances



Source: FOCUS. Allergy Research Group Newsletter: Nattokinase - recent clinical reports confirm its safety and efficacy. November 2008, German edition.

Nattokinase & Dandelion support the following the body's own metabolic mechanisms:

- Self-cleansing in vessels and tissues
- Protection of the cardiovascular system and the brain
- Liver and bile function
- Regulation of fluid balance and cleaning of the kidneys and urinary tract
- Immune strengthening

Groups of people for whom the diet with Nattokinase & Dandelion is particularly recommended:

- People who want to support their inner cleansing
- People who want to support their blood flow and heart
- People who want to strengthen their liver power
- People with low immunity

Recommended intake

2 capsules daily with good water, 30 minutes before a meal.

Notice: May increase the effect of blood-thinning and anticoagulant medicines.
Suitable for vegans. Suitable for ketogenic diet.



Ingredients

Dandelion root extract (*Taraxaci radix*), capsule shell: hydroxypropylmethylcellulose, nattokinase, dandelion herb extract (*Taraxaci herba*).

Free from soy, soy allergens, GMO and vitamins K2 + K1.

In NattoZYM we use dandelion extracts of the highest quality. The plant-extract ratio is 10:1, which means that a daily dose of 2 capsules NattoZYM provides 150 mg of leaf extract and 450 mg of root extract. The total 600 mg of high-dose dandelion extract corresponds to a plant dry mass of 6 g or a fresh mass of at least 20 g.

Our nattokinase has peak enzyme activity and is highly dosed with 6,000 FU* per daily recommendation. It is produced by fermentation of GMO-free soybeans and gentle freeze-drying for optimal preservation of enzyme activity. Nattokinase itself is soy-free due to the fermentation process and does not contain any soy allergens.

Nutritional facts **NattoZYM plus** per 2 Capsules (Recommended Daily Amount)

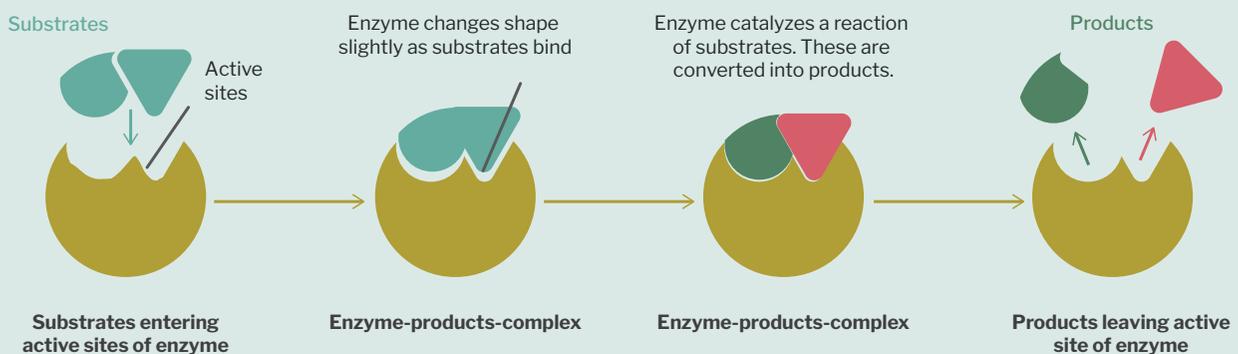
| | | |
|------------------------|----------|----|
| Nattokinase | 6,000 FU | -- |
| Dandelion root extract | 450 mg | -- |
| Dandelion leaf extract | 150 mg | -- |

Very high proportion of the main ingredients compared to conventional products.
Example: Instead of the often common 2,500 FU nattokinase, we use 6,000 FU!

NRV/RDA (Recommended Daily Amount): no limitation
* FU (Fibrinolytic Unit) indicates the enzyme activity.

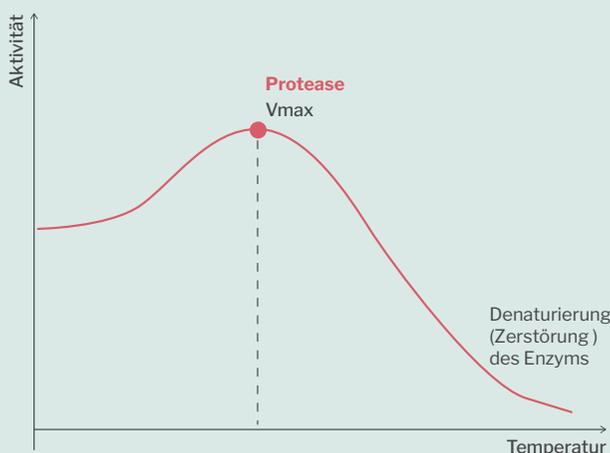
What exactly are enzymes?

All physical and mental processes that take place in our body are influenced or enabled by chemical reactions. At the centre of these reactions are enzymes, mostly proteins, which mediate these important processes in living organisms. Like an initial spark, they activate and accelerate metabolic processes via what biochemists call catalysis. The word *katalysis* comes from the Greek and is also seen in catabolism, the degrading metabolism of amino acids, for example, as we have described in more detail in the information sheet of our amino acid formula **MyAMINO**[®]. However, enzymes do not only degrade, they also dissolve, i.e. bring other substances into lysis by weakening certain bonds of certain molecules and at the same time increasing the reaction speed. The enzymes are not used up immediately, but only gradually broken down, denatured and excreted by the body. The work of enzymes is by no means limited to selected reactions. No: Enzymes are at the heart of our entire metabolism. They are involved in all metabolic processes in the organism, including the breakdown of cellular waste and dead tissue, and the elimination or inhibition of what some call a "virus" or virion, a gene sequence of an authoritative virus. All tissues, muscles, bones, organs and cells are controlled by enzymatic processes: the digestive system, our immune system, blood circulation, liver, kidneys, spleen and our pancreas. Simply everything, even whether we see or hear well or badly, whether we can think and concentrate clearly, how we feel and how we breathe – the function of every single cell in our body depends on enzymes.



Enzymes make it possible for many chemical reactions to take place at all within the biological window of body temperature, oxygen levels, pH value and body electrics in living organisms. As catalysts, they offer an alternative way of generating energy, as the organism needs less activation energy to drive a reaction with their help. They lower the opportunity costs, make life easier and more cost-effective for our organism. They optimise the processes in the body. Ultimately, enzymes help chemical reactions in living organisms to take place many millions of times faster and with less energy than would be the case without them.

We can marvel the building and breaking down performance of enzymes when we look around in nature, where they are at work billions of times over, not just in the soil, where they play an essential role in making grass and flowers grow. If we are healthy and get enough enzymes from our food, we only notice these little helpers when we become aware of their work listening to ourselves – for example, af-



Own graphic: V_{max} characterizes the maximum reaction speed of the biochemical cleavage. The optimum here is 50° Celsius. However, this is followed by denaturation and rapid destruction of the enzyme. The optimal reaction temperature of normal physiological enzyme reactions with minimal denaturation is +/- 37° Celsius body temperature. In fever, the enzymatic activity of protein-cleaving enzymes is increased, which shows that fever is an important amplifier of the defence function within certain tolerance ranges.

ter a good meal in which we also eat fermented products. It's different when there are too few of them and we get weak as a result. Then they become noticeable through a negative feedback loop: we feel weak, tired and without energy.

Since time immemorial, people have used the power of these initial "sparks" to ferment beer, wine and foods such as sauerkraut in Germany, blue cheese in France or fermented vegetables such as kimchi in Korea and natto in Japan. The invented word enzyme itself dates back to the end of the 19th century and was called *énzymon* from ancient Greek, which means "sourdough" or "yeast", both of which refer to the acidic process of fermentation and the enzymes of yeast bacteria, respectively, which initiate such fermentation.

Dandelion: Using synergies

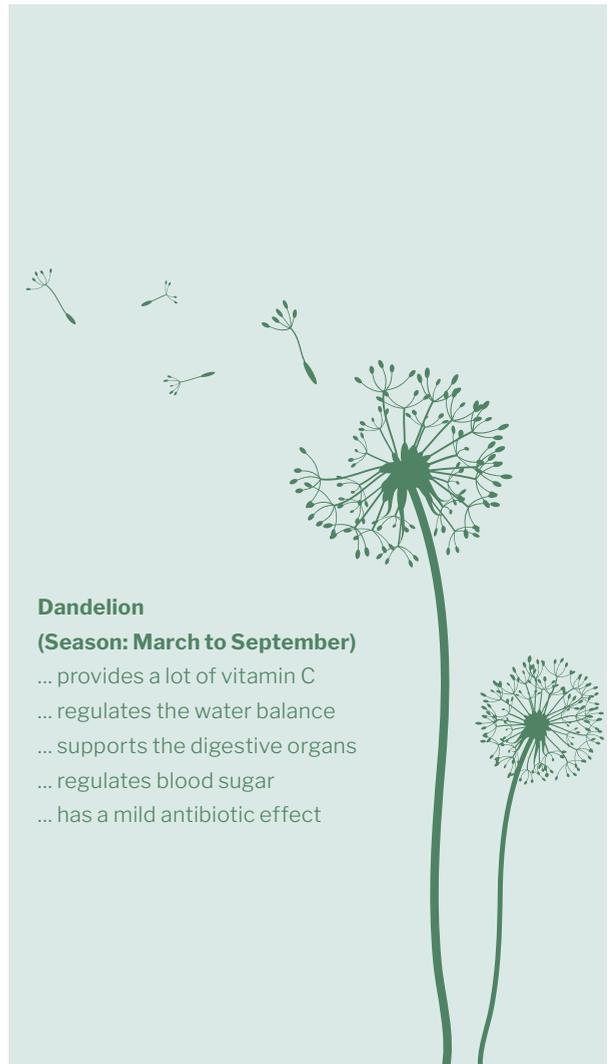
Dandelion, taxonomically known in botany as *Taraxacum*, is a well-known bitter plant from the daisy family (*Asteraceae*). All parts of the plant are eaten worldwide as salads or wild vegetables and therefore have a rich tradition in the local cuisines of many continents.

Dandelion also has a long tradition in natural and folk medicine and is often called "meadow ginseng" in analogy to ginseng, which has been used in Asian cuisine for over 2,000 years to strengthen self-healing powers.³ Its English name *Dandelion* is derived from the French *dent de lion*, in Spanish *diente de leon*, in German *Löwenzahn*. The name refers to the toothed edges of the leaves.

The root of the plant has been used for centuries to stimulate liver, gallbladder and digestive system function and for immune modulation. The leaf is considered diuretic and is used as a digestive stimulant due to its bitter substances. The use of dandelion has always been based not only on the culinary aspect and the enjoyment of the fresh leaves and roots, but also on traditional experience regarding its beneficial and digestive aspects as well as the strengthening of the liver. As a natural diuretic, dandelion flushes the kidneys and urinary tract and helps with the body's own detoxification and the rapid elimination of toxins.

The most important bioactive ingredients found so far in dandelion are concentrated in the root. These include essential oils and flavonoids/phenolic acids. In dry matter, the root also contains from up to 40 % inulin, which is a particularly valuable prebiotic dietary fiber. In addition, there are about 7.8 % pectin and 8.5 % mucilage, which can bind toxins during excretion, as well as numerous minerals and vitamins. The main bioactive ingredient is considered to be taraxacin, which is contained in the whole plant and also in the milky sap of the plant.

In the leaf we find, among other things, the flavonoids apigenin, quercetin and luteolin. Apigenin is a yellow plant pigment and it also occurs in celery, chamomile and dahlias. Luteolin which is beneficial for healthy



sleep, we find it not only in dandelions, but also in numerous other edible plants, e.g. in parsley, artichoke leaves, navel oranges, carrots, celery, olive oil, green pepper, chamomile, peppermint as well as in many spices such as thyme, rosemary and oregano. This shows that a healthy diet based on fresh food is still the best protection against disease. Unfortunately, many of the valuable ingredients are lost through peeling, incorrect storage, especially for too long, as well as heating and other forms of preparation that are not beneficial to the ingredients.

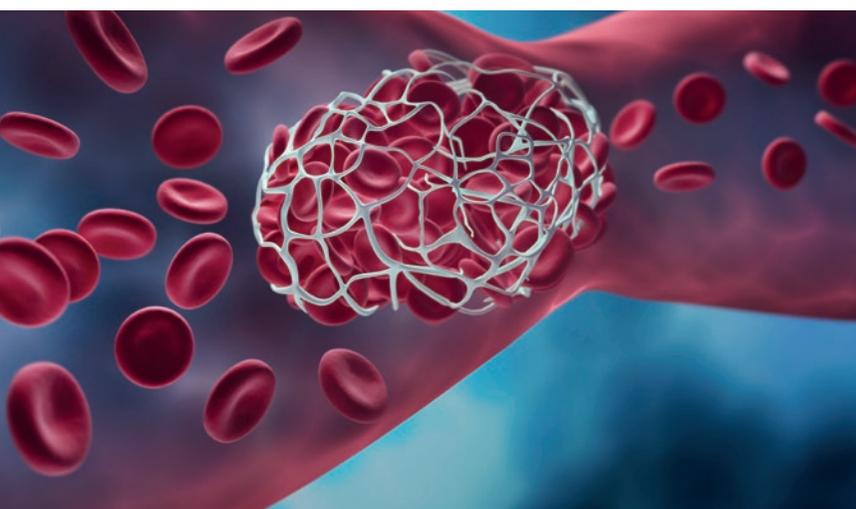
In recent years, numerous researches have brought to light many other hitherto unknown properties of dandelion, and traditional knowledge such as the plant's ability to stimulate liver metabolism has been proven nutritionally and biochemically.⁴ Even nutritional science now recognizes that such plants promote the flow of water in the human body via the above-mentioned regulation of fluid balance in a healthy way, and that this alone already promotes the detoxification work of the kidneys and helps to flush out toxins.

The biochemical mechanisms of action of the dandelion ingredients were still largely unexplored until the turn of the millennium. However, the body of knowledge has since grown massively and, as of the end of 2021, includes almost 900 studies. Beyond the known nutritional and physiological effects, numerous other beneficial effects of the plant have been shown, such as in type 2 diabetes (T2D). The previously unknown antidiabetic and blood sugar regulating properties of dandelion are attributed to the recently discovered chemical bioactive constituents such as chicoric acid, taraxasterol (TS), chlorogenic acid, and sesquiterpene lactones.⁵

Why the combination of nattokinase and dandelion?

As an attentive reader, you may have already noticed: Both the enzyme nattokinase and dandelion with its plant substances interact holistically via various metabolic mechanisms in our body: primary and secondary digestion, excretion, immune response, etc.. Two of the properties of dandelion in particular have inspired us to combine it with the enzyme nattokinase. Any proteolysis, i.e. any protein-cleaving activity simultaneously releases nitrogen waste such as ammonia and produces metabolic waste. This in turn requires the liver's degradation capacity. Due to its well-known ability to stimulate liver metabolism, dandelion therefore provides important co-functions for all enzymatic activities that affect protein metabolism. In other words, the ability of dandelion to promote liver strength is an elementary and therefore extremely useful complement to the powerful fibrinolytic properties of nattokinase. Conversely, nattokinase supports the nutritional spectrum of dandelion. Two partners that are thus ideally made for each other. The dandelion, known as the peasant's "meadow ginseng", has a powerful protective and activating function in liver metabolism, and the fermentation product nattokinase is a particularly active enzyme, both digestive and systemic-metabolic. Nature is clever, and we use its powers!

Due to its special properties, dandelion is one of many herbs that can support a healthy immune response. Especially in combination with the right enzymes such as nattokinase, this team builds a very good basis for immune strengthening and prevention. Together with vitamin D and a regular elimination of unwanted pollutants, also with the help of **PektiCLEAN®** and **Glutathion comp**, you can do something very good for the maintenance of his health and immune defence.



To support the body's own detoxification metabolism, we additionally recommend:



Glutathion comp

Highly effective glutathione complex with the co-factors N-acetylcysteine, alpha-lipoic acid, zinc, selenium and vitamins B1, B2 and B3.



MyAMINO®

The 8 essential amino acids
The Human Amino Acid Profile - Better than any other protein intake. MyAMINO® is a revolution in protein nutrition

Other preparations from our EnZYM series



SerraZYM plus

Serrapeptidase 240,000 EU plus cat's claw extract · Good for lungs, respiratory tract + blood flow.
A versatile proteolytic enzyme.



ProZYM plus

Prolyl oligopeptidase 1 million PPI plus holy thistle extract · For gluten digestion, liver, blood flow + immune defense
An enzyme with ability to cleave proline.

Further information by Dr. Heinz Reinwald about enzymes, our amazing metabolic helpers can be found on the homepage:
www.drreinwald.science.

Inhalt

60 gastro-resistant capsules | 28 g · Sufficient for 30 days.

Source

- ¹ Fujita M. et al: Purification and characterization of a strong fibrinolytic enzyme (nattokinase) in the vegetable cheese natto, a popular soybean fermented food in Japan. *Biochem Biophys Res Commun.* 1993 Dec 30;197(3):1340-7. doi: 10.1006/bbrc.1993.2624. PMID: 8280151
- ² Vgl. dazu die Suchmaschine der größten US-amerikanischen Datenbank für medizinische Forschung PubMed: <https://pubmed.ncbi.nlm.nih.gov/?term=Nattokinase>
- ³ Wichtl Max: *Teedrogen und Phytopharmaka: Ein Handbuch für die Praxis*, 2009
- ⁴ Täufel A. et al., *Lebensmittel-Lexikon*, 1993.
- ⁵ Wirngo FE, Lambert MN, Jeppesen PB. The Physiological Effects of Dandelion (*Taraxacum Officinale*) in Type 2 Diabetes. *Rev Diabet Stud.* 2016 Summer-Fall;13(2-3):113-131. doi: 10.1900/RDS.2016.13.113. Epub 2016 Aug 10. PMID: 28012278; PMCID: PMC5553762

You can obtain NattoZYM plus from:



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