

SerraZYM^{plus}

Serrapeptase 240,000 EU* plus
Cat's Claw extract

With synergistic effect between
natural enzyme and plant compounds

Dietary supplement



To support the body in breaking down protein waste structures in the gut, vessels and tissues, in the self-cleansing of the respiratory tract and immune support

SerraZYM plus contains 240,000 EU (Enzymatic Units) of the natural, proteolytic (i. e. protein-degrading) enzyme serrapeptase. It thus offers a powerful, nutritive support to dissolve stressful and often hard to break down protein compounds, both occurring in the intestine and systemically in the entire organism. What is special about this is that serrapeptase has a natural affinity for dead tissue and leaves living tissue unharmed. Another specialty of serrapeptase is the cleavage of particularly resistant proline compounds, which protect foreign proteins, such as those found in viruses and bacteria, but also in gluten that is hard to digest, to be eliminated by the body's own immune defenses.

Serrapeptase is also gaining traction as a nutrition-based support for post-COVID coping. Especially in combination with cat's claw which has strong antioxidant, i. e. anti-inflammatory capacities, serrapeptase supports the regeneration and self-cleansing of the lungs and airways by liquefying mucus and sputum. This contributes to rapid relief and elimination.

Serrapeptase & Cat's Claw support the following body's own metabolic mechanisms:

- Self-cleansing of the lungs and airways
- Decomposition of protein structures that are subject to degradation, both systemically in vessels and tissues as well as in the intestine
- Degradation of biofilms in the intestine
- Antioxidant capacity
- Immune support





Groups of people for whom the diet with Serrapeptase & Cat's Claw is particularly recommended:

- People with respiratory difficulties, especially smokers
- People with digestive and intestinal discomfort
- People with low immunity

Recommended intake

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

Due to slag-dissolving effects, excretory reactions such as diarrhoea, skin rashes, tiredness, dizziness, nausea or headaches may occur initially, which accompany the excretion of undesirable substances. In this case, we recommend increasing the consumption of two capsules within two weeks, starting with 1 – 2 times half a capsule (open the capsule) per day.

Notice: May increase the effect of blood-thinning and anticoagulant medicines or counteract immunosuppressive drugs.

Notive: Not suitable during pregnancy and lactation.
Suitable for vegans. Suitable for ketogenic diet.

Ingredients

Cat's claw root extract (*Uncaria tomentosa radix*), capsule shell: hydroxypropylmethylcellulose, serrapeptase

Our serrapeptase has peak enzyme activity and is highly dosed at 240,000 EU* per daily recommendation. In addition, we use the highest quality cat's claw extract. The plant-to-extract ratio is 10:1, which means that a daily dose of 2 capsules of **SerraZYM plus** provides 600 mg of holistic, highly concentrated root extract, which corresponds to 6 g of plant dry matter.

Nutritional facts **SerraZYM plus**
per 2 capsules (Recommended Daily Amount)

Serrapeptase	240,000 EU*	--
Cat's Claw root extract	600 mg	--

Very high proportion of the main ingredients compared to conventional products.
Example: Instead of the usual 20,000 SPU or EU* Serrapeptase, we use 240,000 EU*!

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

Enzymes are the workers in our body that have a significant impact on our vitality. To date, more than three thousand different enzymes have been identified in the human organism, which contribute to over ten thousand enzymatic reactions. One of the essential aspects of enzymes compared to most other catalysts or natural enhancers is their high selectivity and specificity, i.e. they “know” when, where and in which compartments or on which substances they have to act, almost as if they were small living beings. And maybe they are. In addition to the digestive and metabolic enzymes produced by the body itself, we ingest enzymes through food. At the same time, by eating healthy food, we also support the body’s own production synthesised by bacteria inside us. Regular consumption of enzymes and enzyme-rich foods such as fermentation products is a key to vibrant health, disease prevention and part of the anti-aging process where it helps to slow down aging. Every cell in our body needs enzymes for its biochemical functions. On the other hand, a lack of these enzymes or their limited effectiveness accelerates aging and impairs healing and recovery processes.

Some of the most important tasks of enzymes are in regulating the growth of the body from a single cell to a mature organism, converting food into energy, breaking down dead tissue, supporting hormonal processes or building certain substances in the cell, as well as important signaling functions. Enzymes help us digest, break down toxins, cleanse our blood, support our immune system, assist in anabolic metabolic processes to build structural and functional proteins, etc., etc.

The enzyme serrapeptase or serratiopeptidase, like nattokinase, belongs to the serine proteases, which as a subfamily of a total of six different proteases make up more than a third of all enzymes. Serralysin, as serrapeptase is also called, already contains the word lysis for “solution” or “dissolution”. However, unlike nattokinase, serrapeptase does not exert its effect solely on the basis of the catalytically active amino acid serine in the enzyme, but also has three zinc atoms involved as ligands, which is why it is counted among the serine metalloproteases subfamily. These special features from the association of the amino acid serine and zinc ions in the catalytic center also determine its unique enzymatic specificity and the special properties surrounding it. Like nattokinase, serrapeptase is one of the systemically active enzymes, but it also has important digestive properties in the degradation of protein-rich substances.

How do we know all this?

Serrapeptase was discovered only a few decades ago by Japanese scientists as a metabolic product of an enterobacterium called *Serratia marcescens* in the intestine of the Japanese silkworm *Bombyx mori*. Silkworm larvae have been bred in China for over 4,600 years. The cocoon spun by the caterpillar is made of silk, one of nature's most luxurious yet strongest and most durable fabrics. The researchers from Japan found out at that time that the function of serrapeptase in the intestine, with which the gut bacteria help the caterpillar, consists essentially of two tasks. The enzyme synthesized via the saliva, is used to digest the main food of the silkworm: the very resistant mulberry leaves. On the other hand, the caterpillar uses it to free itself quickly from the hard cocoon of silk protein after maturation, so that it can then fly off to a new life as a silkworm moth. In this case, the serrapeptase shows a special affinity for the dead protein molecules at the lower end of the strong, protein-rich silk threads that make up the cocoon. Silk is composed of special proteins that are secreted and spun by the caterpillar. The silk is held together by the nearly insoluble *fibroin* and a glue-like layer of another protein called *sericin*. It is an extremely strong, robust and resistant protein compound, and yet it can be easily broken down by serrapeptase. The enzyme literally melts away the dead tissue of the cocoon, quickly releasing the caterpillar into metamorphosis, which in turn protects it from predators.¹ These special enzymatic activities of serrapeptase and the high affinity for dying, necrotic, but not living tissue, which enable the caterpillar to quickly break down the old armor that has protected it up to that point, are unique.



Silkworm with spun cocoon



Silk protein cocoons

No wonder this naturally occurring enzyme caught and spurred the interest of Japanese biochemists in the late 1970's. During their research, they discovered that serrapeptase offered a variety of other health benefits. The repertoire of this enzyme is impressive. The silkworm and the bacterium *Serratia m.*, which lives in symbiosis with it, possess extraordinary health-supporting properties, which inspired the naturopathic and orthomolecular physician Dr. Hans Nieper to call it a "miracle enzyme" as early as the 1980s.²

As a fibrinolytic protease, it is in the nature of serralyisin to support the organism in many of its cleansing tasks, such as the breakdown of protein structures that are subject to degradation in the intestine, but also systemically in the entire organism, such as in the blood. Therefore, we point out that serrapeptidase, due to its fibrinolytic function, also has blood-liquefying properties and can enhance the effect of blood-thinning and anticoagulant drugs. Due to its mucus-liquefying properties, it contributes to the self-cleaning of the respiratory tract and counteracts biofilms in the intestines.^{3/4/5/6/7}

History of *Serratia marcescens* and Serralyisin

Researchers have only known more about the bacterium itself for a few years, although it was discovered as early as 1819 by the Venetian pharmacist Bartolomeo Bizio in connection with the "bread miracle" of Christ. The inhabitants of the city of Padua wondered about red stains on their polenta and related it to the transformation of bread and wine into the body and blood of Christ that allegedly occurred during a mass in Bolsena in 1263, i.e. in accordance with the doctrine of transubstantiation preached by the Church. An event immortalized by the famous painter Raphael in a fresco in the Apostolic Palace of the Vatican City. However, Bizio very quickly found out that the reason for the peculiar "bleeding" of the corn mass was a bacterium that expressed a red pigment, which we know today under the name of *prodigiosin*, which in English means something like "wonderful". Bizio labeled the bacterium *Serratia marcescens* in honor of the Italian physicist Serafino Serrati, the appendix referring to the rapid decay of the pigment.

Meanwhile, scientists have even been able to demonstrate that *prodigiosin* improves the rodents' gut flora.⁸ *Serratia m.*, through its intestinal activities, even protects the malaria mosquito *Anopheles sinensis* from the effects of Plasmodium infestation and thus from the very pathogen of malaria that it can transmit to humans through its bite.⁹ The bacterium is therefore very helpful in many respects, including intestinal health.

We now know numerous *Serratia* species. They belong to the large family of enterobacteria. The enterobacterium *Serratia marcescens* is the most common species. It is found not only in the intestine of the silkworm, but also everywhere in nature: in water and on the ground, in animals and plants such as zucchini, but also as a symbiont in the human intestines, where the germs break down organic substances and provide important enzymes, including serrapeptase.¹⁰ This shows that this ubiquitous microorganism has an important regulatory function in organic processes not only in the soil but also in the human biotope.

When bacteria cluster together, they form a protective barrier that allows them to multiply. If this happens to an low-oxygen and toxic environment, bacteria are forced to take other metabolic pathways such as nitrate or iron respiration to ensure survival. This leads to dysbiosis and inflammation in the gut. At the same time, the bacteria form biofilms as barriers to defend against antibiotics and other attacks. It is believed that proteolytic enzymes such as serrapeptase are able to dissolve and dilute the formation of these biofilms via proteolysis of the proteins contained in biofilms, similar to what happens in the cocoon of the silkworm, and so with other mucus-containing substances, such as in the respiratory tract. The effective range of action of the enzyme systemically is between pH 7 and 9, with the optimum being reached at 40° temperature. It is only denatured at a temperature of 50° and above.

Cat's claw – *Uncaria tomentosa* – as a co-factor

The cat's claw belongs to the three great plants that have been used in Latin America for thousands of years by indigenous population also in traditional folk medicine. It is preferably consumed as a tea by the peoples of ancient America to purify the mind and body and to protect against disease. In the traditional medicine of the curanderos in Middle and South America, cat's claw occupies a similarly prominent position as dandelion and milk thistle in Europe or ginseng in Asia.

We owe our knowledge of this plant to a group of Austrian mountaineers who, during an Andean expedition in the lowlands of Peru in 1959, came across members of the Amazonian Asháninka tribe, from whom we also know the hallucinogenic liana juice drug ayahuasca, which they use for ritual-religious purposes. The "medicine men" of the Western expedition exchanged views with the curanderos of the tribe, which has settled the lowland jungle on the edge of the former Inca Empire for 5,000 years. In this way, the secrets of the plant rea-





ched the public and the West, where they aroused great scientific interest. The Spanish name for the cat's claw is *Uña de Gato*. The taxonomically correct name is *Uncaria tomentosa* (Willd.) DC. *Uncaria*, of which two genera are native to Latin America, is a mighty vine of the redbud or coffee family (*Rubiaceae*). However, it does not grow as a tree or shrub like coffee, but as a liana high into the sky, with its widely branched trunks up to 30 cm thick, sometimes reaches a length of several 100 meters.

For the indigenous peoples, who call the plant "Villcacora", which means something like sacred plant, the liana is considered a gift from the gods. According to an Asháninka legend, the healing powers of the cat's claw was revealed by one of their gods to a tribesman who was out hunting. After an unsuccessful hunt, he stopped to rest, exhausted, and saw a mighty puma scratching the bark of a liana with its claws and drinking the sap of the plant. The hunter followed the example of the big cat and fell asleep after taking the drink. In his dream, the hunter saw himself trying his luck again and was able to kill a large armadillo with just one accurate arrow. Since then, the Asháninka have believed that the cat's claw is a magical and at the same time healing and power-giving plant.¹¹ The leaf tendrils of *U. tomentosa* are curved like a sickle and are also visually reminiscent of the shape of a cat's claw.

Since the late 1990s, the scientific literature on the *Uncaria* genera has increased enormously and is currently meeting with ever-increasing interest, especially for the follow-up care of people suffering from post-Covid syndrome. Numerous publications – more than 700 – on the bioactive, antiviral and other properties of the plant and its related genera of the *Uncaria* family in Asia, which have also been examined in the meantime, such as *U. Hook*, *U. sinensis* or *U. rhynchophylla* are now available under PubMed alone, the largest online biochemistry and medicine database in the United States.^{12/13} As of February 2022, there are even more than 255 studies for *Uncaria tomentosa*.¹⁴

The root of *U. tomentosa* contains at least 26 biochemically active plant substances. The main ingredients examined so far are, in addition to the important alkaloids, primarily sterols, triterpenes, and flavonoids such as procyanidin, epicatechin, catechin as well as phenolic compounds. The tannins isolated in cat's claw are also found in green tea. The richness of plant constituents also explains their non-specific, numerous regulating and sometimes contradictory effects in the organism. Nature is just clever. It regulates in a non-specific and system-open way with the help of control and counter-control, not via simple mechanical attacks of inhibition or activation via mono-substances, as they typically occur in drugs. In other words, the plant contributes to the balancing of numerous regulatory circuits and feedback loops of important metabolic pathways in the organism.

Why the combination of Serrapeptase & Cat's Claw?

As an attentive reader, you may have already noticed that both the enzyme and the plant substances of cat's claw interact via various metabolic pathways and, depending on the requirements, are both-as well active, i.e. systemically and not unilaterally. For this reason, we have chosen an enteric-encapsulation. We want as much serrapeptase as possible to unfold in the small intestine in order to increase the systemic effect. The following properties of cat's claw particularly inspired us to combine it with the enzyme serrapeptase. One is its support of the self-cleansing powers of our organism that promote the protein-cleaving work of the enzyme, since the plant substances help to "clean up". In addition: The mucus-liquefying properties and the associated facilitation of mucus dissolving and excretion through the upper respiratory tract with the help of serrapeptase ideally complement each other ideally with the properties of cat's claw and its positive influence on the immune system.

Due to its special properties, cat's claw is one of many plants that can support a healthy immune response. Especially in combination with the right enzymes such as serrapeptase, this combination forms a very good basis for immune strengthening and prevention. Together with other substances such as vitamin D and a regular excretion of unwanted pollutants, e.g. with the help of **PektiCLEAN®** and **Glutathion comp**, you can do something very good to maintain of your health and immune defense.

Please note that initially excretion reactions can occur, which can be quite severe depending on the body's own slugging. These include diarrhoea, skin rashes, tiredness, dizziness, nausea or headaches, which often accompany the excretion of unwanted substances. This can be remedied by "creeping in", i.e. slowly increasing the amount consumed. In such a case, you can start with 1 – 2 times half a capsule (open the capsule) per day. Opened, however, you should take it between meals.

Cat's Claw (*Uncaria tomentosa*)



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.



PektiCLEAN®

Micro-pectin fiber with specific binding properties
Cell-active · Loosening · Binding · Excreting

Other preparations from our EnZYM series



NattoZYM plus

Nattokinase 6,000 FU plus dandelion extracts
For blood flow, liver, urinary tract + immune defence
An enzyme with ability to cleave fibrin.



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.

Content

60 gastro-resistant capsules | 27 g · Sufficient for 30 days.

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You can obtain SerrazYM plus from:



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