

## FAQ COLLAGEN MASKS

Here you will find frequently asked questions on the topic of collagen masks.

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## What is a biomatrix?

The term biomatrix is derived from two individual terms:

bio (as part of a word compound meaning life, nature, natural state, natural) and matrix (Latin: progenetrix). A natural cell structure which is similar to living tissue, in an environment whereby skin cells feel at home and are able to multiply.

## What are galenic systems?

Galenism is the theory for the administration of medicines. The effect of medicines or active ingredients on the human organism is not only defined by the quantity and quality of the active ingredient itself, but also by its form of administration - Galenism. Depending on their form of administration, biological active ingredients of the same strength can vary in efficacy. galenic systems are for example, tablets, ointments, creams and emulsions or the biomatrix. In addition to the efficacy, the galenic system also significantly influences the chemical stability, generally the shelf life of the active ingredient.

## What are cosmetic active ingredients?

To maintain and improve the skin's condition, substances are added to care products in order to balance out deficits of the skin. In the case of dry skin these are e.g. substances which bind water; in the case of oily skin these are substances which are capable of absorbing the skin's oil.

## What happens during lyophilization/freeze-drying?

Freeze-drying is a two-stage high-tech procedure for the gentle drying of valuable products. It uses the physical rule that ice in a vacuum is converted directly to steam without the water thawing out. This process of direct conversion from solid ice to steam is called sublimation. In Phase I of freeze-drying the product to be dried, e.g. a homogeneous collagen or algae emulsion, is shock-frosted at extreme minus temperatures.

In Phase II the product remains in a vacuum chamber for many hours or days. When a little heat is added, the ice transforms to steam and appears on the deep-frozen condensers in the form of ice. The result is a highly porous matrix. The three-dimensional structure of the product is maintained and the material does not shrivel up. The natural, biological and physical properties of the raw material are fully maintained. The cell systems which have been drained of water form a large inner surface which can be rapidly hydrated. The result is a product with very high absorbency.

## What are the advantages of lyophilization/freeze-drying?

Freeze-drying maintains the natural biological and physical properties of the raw material. For this reason, it was first used for the preservation of blood plasma in the Second World War. Not until 20 years later were its' advantages discovered for the preservation of foodstuffs because freeze-drying fully preserves taste, aroma, color and shape of raw materials. This led to the development of freeze-dried instant coffee and the freeze-drying of meat for ready meals, as well as of fruit for muesli and chocolate.

Thermal drying with high temperatures, on the other hand, leads to changes of the raw materials, temperature-sensitive aromas disappear, proteins coagulate (example: boiling eggs), fruit, vegetables and herbs shrivel up (air-drying). The physical structure is thus destroyed by dehydration and a rehydration of the products is more difficult and can lead to products becoming tough. This is completely different in the case of freeze-drying.

## Why are products freeze-dried?

A basic prerequisite for the efficacy of biological substances is a native, physically intact structure. Proteins and enzymes can e.g. be changed to such an extent by external influences (temperature, chemicals and pressure) that their original three-dimensional form is changed. In the vast majority of cases, the substances then lose their biological function and denaturize. As freeze-drying preserves the native, three-dimensional structure of the ingredients, the resulting products still have a high degree of biological activity. A further, important advantage of this procedure lies in the fact that substances are not exposed to high temperatures. Substances which are not temperature-resistant are protected and remain biologically active.

The removal of water produces dry products. This waterless environment offers any existing microorganisms a conceivably poor basis for existence. For this reason, freeze-dried substances must not be additionally chemically preserved. This makes the products particularly interesting for the cosmetics industry, as preservatives lead to an increasing frequency of skin irritations.

## How are the products preserved?

Freeze-drying also enables a very gentle preservation of highly sensitive ingredients by removing practically all moisture from the substance, including the basis for existence of possible germs or fungi. That is why this technical procedure is frequently used in the pharmaceutical field, e.g. for the preservation of substances as sensitive as vaccines. The freeze-drying of our products means that we can completely eliminate the addition of preservatives. For this reason products are free from preservatives.

## What is collagen?

Collagen is the most frequently occurring protein in humans (mammals). It can be found wherever mechanical firmness plays a significant role in the organism, e.g. in bones, teeth, tendons, blood vessels and the skin. It is collagen which gives the skin firmness and elasticity. Through the aging of collagen, the skin loses its elasticity and resilience.

## Where is collagen from?

The collagen is of bovine origin and is extracted from the skin of the bulls' neck - the so-called dermis of cattle from South America, Australia or New Zealand, which are subjected to a strict control in accordance with the WHO standard and which have an individually documented origin.

The dermis is situated below the top layer of skin (epidermis) and is particularly rich in collagen. By separating the top layer of skin, the dermis is extracted and processed into collagen masks through a very lengthy process.

## What are collagen fibrillae?

Both the chemical composition and the structure of the substances are of elementary importance for the fulfilment of the biological function. Particularly collagen has a unique, complex structure, which is highly important for the mechanical properties of the skin (firmness, elasticity).

Collagen is classified as a protein and consists of amino acids. Collagen synthesis creates a chain of amino acids (a protein). Three of these chains are interlinked and a triple helix is formed. Subsequently, several of these triple-helices combine to form micro-fibrillae. When several micro-fibrillae combine to form bigger and bigger structures, collagen fibrillae are formed.

## What does atrophic mean?

Atrophy means: "Decrease in size or decomposition of an organ or organ system." Atrophic skin has stronger decomposition processes than structuring processes usually due to medicines, cortisone, etc. and aging. The skin becomes thin and its protective function is weakened. Atrophic skin requires very gentle treatment. The care aims to boost the skin's structuring process and to decelerate the skin's decomposition by selecting the right active ingredients.

## What does "hydration properties" mean?

We refer to hydration properties when products are capable of transferring moisture into the skin. Everyday the skin loses moisture or water through sweating and evaporation. This leads to dehydration of the skin and to a skin that is low in moisture. Water is a solvent of all substances in the skin, which must be transported within the skin in order to fulfill the skin's tasks. If there is a water deficit, the skin has a weaker protective effect against damaging external influences. That is why cosmetics with good hydration properties and drinking should be used to transport water into the skin.

## What does anti-irritation effect mean?

A product has an anti-irritation effect when it reduces redness and irritations and calms the skin. If e.g. the pores of a skin prone to blemishes are deep cleansed and red spots appear, an anti-irritative product is able to reduce this redness.

The same applies to redness which is caused by sunburn.

## Is it dermatologically tested?

Both pure collagen mask variant (sensitive), as well as all major active ingredient variants, have been tested - in the form of studies - for dermatological compatibility and cosmetic effect. The studies showed the hypoallergenic effect of collagen masks, even when applied to problem skins (e.g. atrophic skin). All products have been rated as safe by a cosmetology specialist. Furthermore, we collect and evaluate all market feedback.

## Are these products in their final state?

The products are ready-for-use and can be directly applied. Until they are used, the active ingredients are stored in the biomatrix as if they were in a "deep sleep". They are not activated until the application - by moistening the mask.

## What is so special about collagen mask?

Collagen mask is the only skincare product to contain over 90% collagen. Collagen is our skin's most important building block. The collagen in our biomatrix is in its original (native) form and is thus very similar to human collagen. During the application, it is transformed into a "second skin." The mask hugs the skin and is recognized by the skin as a skin-similar material. The mask is able to fully develop its calming, anti-irritative effect and the skin is able to thoroughly absorb the moisture and the active ingredients.

In contrast to collagen masks, creams with collagen, for instance, contain only a very low percentage of soluble collagen.

The high collagen content of the masks, the native structure and thus the preservation of biological activity result in extraordinary efficacy.

What is the difference between collagen masks and other collagen products (e.g. soluble collagen or cotton fleeces with collagen)?

Collagen mask is the only biomatrix available on the market, which solely has collagen as the structuring component (carrier and active ingredient in one). This is why the collagen content of collagen masks is considerably higher than that of other treatment systems on the market. By a patented manufacturing process the collagen is uniquely preserved and maintains its original biological activity.

Why does it show differences in the transparency and thickness of its products?

A mask stands out due to its natural character and uniqueness. No mask is identical to another. It is a natural product with a naturally varying texture. Differences in transparency and density of the products are characteristic features for the natural product. Due to the varying density, some masks appear to have different thicknesses. In actual fact, all masks have a constant thickness, which is guaranteed by our quality control. In spite of possible differences in density and transparency, we guarantee a constantly high efficacy.

How does it work on the skin?

Adding moisture activates it. Together with components of the protein chains of collagen (amino acids, oligopeptides), this moisture and the cosmetic active ingredients penetrate the skin. Result being:

- \* Thorough moisturizing and thus improved transport of substances in the skin
- \* Reduction of diffusion resistance in the skin so that cosmetic active ingredients can be more easily absorbed
- \* Higher moisture holding capacity due to the amino acids and oligopeptides of collagen of the skin
- \* Visible smoothening of wrinkles
- \* Cooling and calming, e.g. after deep cleansing of the pores of irritated skin in order to minimize inflammatory reactions

Mobile cells of the immune system look for immunologically reactive substances on the skin's surface in order to trigger defence reactions. One special feature of masks is its similarity to the skin's collagen. This means that defence reactions do not occur. Minor bleeding of the skin, which can occur after the removal of blemishes, is stopped by the masks. The application thoroughly moisturizes the skin and ideally prepares it for subsequent intake of nutrients, cools it, calms it and stops minor bleeding. Due to these properties, it is thus highly recommended for the moisturizing and calming of highly sensitive skin.

Are there any side effects?

There are a few individual cases of collagen allergies in medicine, if the treatment involved implantation of collagen in the human body. For treatments in the body, the collagen remains at the site of application and is decomposed and converted there by the body. There are virtually only reports of allergies, when soluble collagen - the mask collagen is insoluble - was used to inject wrinkles, etc. When applied to the skin, there are even less reports of signs of an allergy. Collagen allergies are extremely rare and, even after the application of many masks worldwide, there are virtually no known side effects whatsoever.

There is a special feature of all masks, which adhere closely onto the skin and therefore, obstruct from the air (occlusive effect = non-exposure to the air) or near obstruction from the air (semi-occlusive effect). Underneath such an occlusive or semi-occlusive

mask, the applied cosmetic product can have a greater effect. If the cosmetic product is beneficial, it will be even more effective under (semi-) occlusion. However, if a product is not tolerated, this adverse effect can also be increased by the occlusive effect. This then results in sensitive reactions where the mask is applied, which are potentially connected to the cosmetic product applied underneath it.

Our masks contain neither preservatives nor perfumes and are hypoallergenic. They are ideal for the care of sensitive skin. When treating customers with sensitive skin, an activator should be used that does not contain any skin irritants either. Thus skin irritations are completely avoided.

## What preparation is necessary before applying the mask?

When taking the masks out of the packet, hands should be dry. So as not to prevent active ingredients from penetrating the skin, no water-in-oil emulsions or oil-based concentrates should be applied prior the masks.

## Which liquids can be used to moisten the mask?

Collagen is a special material produced by the body, which is capable of absorbing and storing large quantities of water. That is why collagen is most compatible with watery solutions. For specific care of the skin type to be treated, or in order to reduce a certain skin deficit, special activators can also be used, which contain additional cosmetic active ingredients, e.g.:

- \* Skin moisturizers (polyols such as glycerine)
- \* Ionic additives (e.g. thermal water)
- \* Active ingredients (anti-oxidants, skin calming agents, etc.)

As the application is a hydro-treatment, there should only be a low percentage of oil in the activator. Activators with a high percentage of oil or the use of emulsive liquids make the moistening (activation) of the biomatrix more difficult. When treating customers with sensitive skin, an activator should be used that does not contain any skin irritants either. Thus skin irritations are completely avoided.

## What happens if too little/too much liquid is used?

The mask can absorb 30-times its own weight in liquid, which is directly supplied to the skin upon application. In order to activate the A4 format mask, 50-60 ml liquid is required. If the mask is not sufficiently moistened, it is unable to completely develop its effect. Furthermore, the mask is easier to model when sufficiently moistened.

The effect is not impeded by too much moisture. However, the surplus liquid drips off the mask if the mask is given more liquid than it can store.

Tip: This surplus can be caught by placing a folded towel around the back of the customer's neck (like a scarf).

## How long does MATRICOL® remain on the skin?

Once the biomatrix has been completely moistened, it remains on the skin for 20 minutes.

## What subsequent care for the skin is recommended?

During the mask's activation time, the skin is supplied with copious amounts of moisture. In order to retain this moisture in the skin, after care with an oil-in-water emulsion is recommended.

## How often can MATRICOL® be used?

It can be used daily. After application, a treating cream should be applied to the skin.

What happens if it is applied too often?

As it does not have an exfoliating effect and no highly oil-replenishing effect, overcare of the skin is impossible. It is free from ingredients, which could irritate the skin (e.g. preservatives or perfumes).

Why are there different colours of masks?

In order to optically distinguish different active ingredient variants we supply our products in different colours. Water-insoluble pigment colours are used to dye the masks. These are hypoallergenic, finely ground minerals.

Which variant can be used for which skin type?

<b>Variant</b>	<b>Skin condition</b>	<b>Cosmetic effect</b>
Sensitive	Skin with moisture deficits, acutely inflamed areas of skin & irritations	Moisturizing, anti-irritant and haemostyptic
Hyalu. Acid	Skin with moisture deficits, deep moisturizing, wrinkles	
Lift	Skin with moisture deficits, deep moisturizing, and expression wrinkles	
Lightening	Skin with moisture deficits, deep moisturizing, spots, hiperpigmentation Sun damages	

Is it also suitable for men?

It is also highly suitable for men. Men's skin has a somewhat different structure of the connective tissue and thus other problems (e.g. wrinkles at a later stage, which are then however many, very pronounced and deep). However men benefit from the moisturizing, calming and protective effect just as much as women.

What factors are important when storing the products?

Wherever possible, they should be stored in its closed, original packaging at room temperature. Keep away from moisture and direct sunlight. As they are pressure-sensitive, no heavy objects should be stored on top of the products.

How long is the shelf-life?

When stored in their closed, original packaging, the products are good for at least three years.