



ocean actives

# Collagen 1%

Collagen from the Deep Ocean



# Qollagen 1% – the Synonym for Moisture and Elasticity

**Jellyfish is an innovative resource of original, pure collagen. These sea creatures are sea water coming to life: they are composed of 98% water. The collagen fibers bind this high water content and give structure to the jellyfish body. oceanBASIS extracts collagen in a gentle way to preserve the native triple-helix structure. Thus, Qollagen 1% retains the collagen's moisture-binding and film forming properties. During the careful processing only the voluminous "umbrella" (mesoglea) of the jellyfish is used.**

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## Native Structure

Collagen consists of three intertwining strands of protein. By increased temperature or chemical treatment its native structure dissolves and loses its natural elasticity and stability. Jellyfish is a very pristine sea creature. Thus, even its collagen is structurally very original compared to collagen from fish, cattle and pigs. Qollagen 1% contains a high proportion of native, intact collagen strands in comparison to other marine collagens.

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## Protection Shield for the Skin

Moisture loss is the main cause of skin aging and wrinkling. The protective collagen film prevents excessive water loss, keeps the cells vital and helps the skin maintain its resistance to environmental influences.

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## Certification

Qollagen 1% exclusively contains nature-identical preservatives and is certified according to NATRUE guidelines for natural cosmetics. It is therefore suitable for use in natural cosmetic products.



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## Water binding Capacity

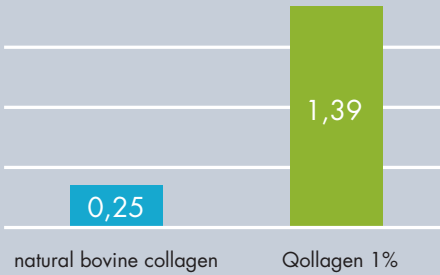
The single collagen strands contain a majority of multi-connected sugar molecules which themselves bind water molecules. Thus, Qollagen 1% has an increased water intake and binding ability in comparison to other collagens. The moisture provided through the product formulation is kept in the skin by the protective collagen film. Due to the polar binding sites of the collagen moisturizing ingredients remain on the skin where they can establish a sustainable depot.

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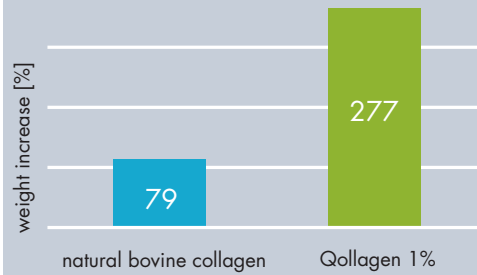
## Reduction of Water Loss

Collagen strands are not able to penetrate the skin because of their large size. They form a meshwork that covers the skin like a moisture film and help to prevent transepidermal water loss. The moisture remains in the skin cells and hence support a smooth, young and fresh-looking teint. Small wrinkles and pore size can be reduced.

Hydroxylysine/Lysine ratio as measure of the degree of water binding capacity



Water absorbance capacity (relating to lyophilized collagen)



## Advantage/Effect:

- prevents wrinkle formation
- smoothes existing wrinkles
- slows down skin aging
- regenerates sustainably
- can reduce pore size
- prevents from water loss

## Remineralisation

The sea minerals help to regulate the skin's water balance and to remineralize exhausted and stressed skin cells.

## Sustainability

The jellyfish populations are subject to large fluctuations in the oceans. Occasionally, they appear in big swarms and may become a nuisance. Because aquaculture of these organisms currently is not possible, they are trapped under controlled conditions. Jellyfish is also used as food in Asian countries and, thus, is subject to strict quality control for food.

## Biologically safe

Due to the pristine origin of marine jellyfish, there is no risk of contact with fish allergens or BSE (bovine spongiform encephalopathy).

## Innovation

With Qollagen 1% the R&D Center of oceanBASIS presents an additional product, that makes marine resources for human use available while keeping ecology in mind. It is derived from the same raw material that two medical products have been developed from.

## Characteristics:

INCI Description	SOLUBLE COLLAGEN
INCI Function	antistatic, film forming, hair conditioning, humectant, skin conditioning
USP	very original structure not comparable to other collagens
Core Statements	<ul style="list-style-type: none"> <li>- innovative source</li> <li>- high amount of native collagen</li> <li>- high moisture binding capacity</li> </ul>
CAS No.	9007-34-5
EINECS No.	232-697-4
Organism	<i>Rhopilema sp.</i> (jellyfish)
Condition	liquid to viscous
Color	yellowish, opaque
Odor	acidous
pH Value	3,5-4,5
CFU	<del>&lt; 100 cfu/g</del> < 500 cfu/g
Recommended Concentration	3-5 %
Preservation	benzoate, sorbate
Salt Content	0,8-1,0 %
Solubility	well soluble in water
Storage Information	12 months at max. +20°C (+68°F)

## Illustration of collagen meshwork



Collagen 1% – the original oceanic collagen with high water binding capacity.



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#### Position:

**sea.** The sea is source of our inspiration and our products. It keeps immense treasures of substances that we want to make accessible to people without damaging this sensitive habitat.

**science.** The research and development of marine resources for health and well-being is our priority. We do research on natural and environmentally friendly products.

**solutions.** Solutions to the problems of our time, return to the values of nature and protection of ocean habitats are central to our efforts.

#### Business Segments:

**ocean actives:** NATRUE-certified extracts from marine organisms for cosmetics and hair care products, cultivation of brown algae *Laminaria saccharina* in the first certified organic offshore seaweed farm in Germany

**ocean biotech:** Research and development of marine drugs for medical applications

**ocean cosmetics:** Certified natural cosmetics, toiletries and algae based drinks



#### Literature

**Antioxidant and melanogenesis-inhibitory activities of collagen peptide from jellyfish (*Rhopilema esculentum*).** Zhuang Y, Sun L, Zhao X, Wang J, Hou H and Li B; *Journal of the Science of Food and Agriculture*, 2009 Aug; 89 (10): 1722-1727; **Effects of collagen and collagen hydrolysate from jellyfish (*Rhopilema esculentum*) on mice skin photoaging induced by UV irradiation.** Zhuang Y, Hou H, Zhao X, Zhang Z, Li B.; *J Food Sci.* 2009 Aug; 74(6):H183-8; **Radical scavenging activity of protein from tentacles of jellyfish *Rhopilema esculentum*.** Yu H, Liu X, Xing R, Liu S, Li C, Li P.; *Bioorg Med Chem Lett.* 2005 May 16;15(10):2659-64