

## ENNAPURE CS Marine Oligosaccharide

Ref.: OMP

### ► DESCRIPTION

ENNAPURE CS is an aqueous solution of 10 % pure chondroitin sulphate, a marine oligosaccharide extracted from fresh fish cartilage.

### ► ORIGIN

ENNAPURE CS is developed in the respect of the environment. Extracted from selected by-products coming from fishes of the Atlantic Ocean, it is thus generated by activities linked to the marine world and therefore represents sustainable use of the marine resources.

### ► PRODUCTION PROCESS

ENNAPURE CS is a mixture of 4 & 6 chondroitin sulphate obtained by an exclusive enzymatic hydrolysis process followed by several purification steps including filtration, deodorisation, and sterilisation. This process calls on natural reactions without organic solvents and gives a very pure oligosaccharide which is completely soluble in water.



### ► THE ACTIVE CONSTITUENT

Chondroitin sulphate is a mucopolysaccharide, part of the glycosaminoglycans (GAGs), the main components of the fundamental substance in which, within the skin, fibrous proteins like collagen and elastin are bathed. The GAGs are playing a direct role in skin moisture and architecture. They retain water inside of the connective tissues and thus contribute to the firmness and elasticity of the skin. They also favour the metabolic exchanges and retention of the nutriments, protect the collagen and take part in its biosynthesis, and participate in the healing process.

It has been noticed that with ageing the level of GAGs in the skin is decreasing, especially over 50, and is associated with loss of moisture, reduction of the skin thickness, and appearance of wrinkles.

### ► COSMETIC PROPERTIES

ENNAPURE CS is a moisturizing, protecting, restructuring and repairing ingredient for all skin types.

Several studies have shown the strong film-forming properties of the Chondroitin Sulphate, without any occlusive or hardening effect. This film protects the skin and contributes to maintain moisture and flexibility. (*Gagnieux & al. Journée de Dermocosmétologie de Lyon, 1987*).

Other studies have shown that application of Chondroitin Sulphate increases the number of fibroblasts and stimulates the synthesis of collagen. It also accelerates the healing process in case of cuts and wounds. (*Suyama & al. Japan J. Exp. Med., 1966, vol. 36, 4, 449*).

Chondroitin Sulphate is also considered as a good hair-conditioning agent (*Martini & al. Actifs et Additifs en Cosmétologie. TEC & DOC, Paris, 1999*).

► SPECIFICATIONS

Appearance	Limpid liquid, slightly viscous
Colour	Colourless
Odour	Slight, pleasant
pH (1 % solution)	5.5 - 7.5
Dry extract	≥ 10.0 %
Proteins (Biuret method)	≤ 0.5 %
Minerals (total ashes)	≤ 2.5 %
Average molecular weight	100 000 Daltons
Chondroitin Sulphate content	≥ 9.4 %
Total germs	< 100 /ml
Yeasts and moulds	< 100 /ml
Pathogens	Absence
Preservation	0.3 % Phenonip 0.15 % Sorbic acid

► APPLICATIONS

- Moisturizing and protective products for dry and rough skin, sensitive skin, oily and acne-prone skin, men skin...
- Anti-ageing creams
- After-shave balms
- Eye-contour products
- Shampoos and hair conditioners

Use level: 0.2 - 5 %.

At 5 % concentrations, ENNAPURE CS has a tensor effect.

► TOXICITY

Oral toxicity:	Not toxic
Skin irritation (human patch test):	Not irritant (100 % concentration)
Eye irritation:	Slightly irritant (100 % concentration)

Test of 28 days use on volunteers with atopic and sensitive skin: average to excellent.

FOR EXTERNAL USE ONLY

► PRODUCT IDENTIFICATION

INCI Name (EU)	INCI Name (US)	CAS no.	Einecs no.
Aqua	Water	7732-18-5	231 791 2
Sodium Chondroitin Sulfate	Sodium Chondroitin Sulfate	9007-28-7	232-696-9

Customs tariff no. (EU): 05119190 (Fish Products) or 29400000 (Polysaccharides).

► STORAGE

Keep in the original unopened container, at room temperature (20°C), away from light, heat and humidity sources. Once opened, keep at +4°C and use the content quickly.