

trylagen®



A trifunctional ingredient for an integral collagen treatment

1 Boosts collagen synthesis



Description

Combination of active peptides and proteins that provide an efficient treatment to restore the collagen levels of youth and mature skin, maintaining an adequate long-lasting collagen function that will ensure a healthy and youthful skin.

Appearance

Yellow suspension containing

12.5 %	Pseudoalteromonas Ferment Extract
2.86 %	Hydrolyzed Wheat Protein
1.86 %	Hydrolyzed Soy Protein
0.04 %	Tripeptide-10 Citrulline
0.01 %	Tripeptide-1

INCI

Water (Aqua), Pseudoalteromonas Ferment Extract, Hydrolyzed Wheat Protein, Hydrolyzed Soy Protein, Tripeptide-10 Citrulline, Tripeptide-1, Lecithin, Xanthan Gum, Carbomer, Triethanolamine, Caprylyl Glycol.

Please contact us for information on the preservative system.

2 Uniformises fibril diameter and spacing

Science

During the aging process, the synthesis of collagen is reduced and both degradation and disorganisation of the fibril network are increased, resulting in connective tissue damage, and the loss of the skin three-dimensional integrity, culminating in the development of wrinkles. **trylagen®** acts at these three stages in the life of collagen and its activity is made up of three main functions: boosts the synthesis of Collagen types I, III and IV, controls collagen fibril dimensions and inhibits enzymatic destruction, avoiding excessive collagen damage in aged skin.

Properties

Integral collagen treatment that tackles the problems associated with each aging stage.

Applications

trylagen® can be incorporated in cosmetic formulations where attenuation of wrinkles is desired.

Dosage 1-5 %

Solubility Water soluble.



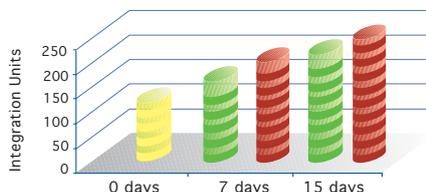
In vitro efficacy

1. COLLAGEN BOOSTING

• Increase in Collagen types I and IV synthesis

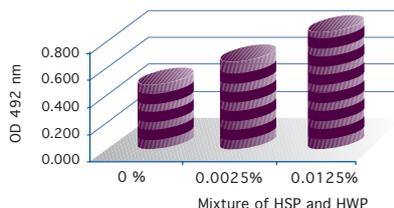
A sample of a cream containing 1.25 % Pseudoalteromonas Ferment Extract was tested in reconstituted human skin.

- CONTROL
- LEVELS OF COLLAGEN IV
0.00125%
Pseudoalteromonas
Ferment Extract
- LEVELS OF COLLAGEN I
0.00125%
Pseudoalteromonas
Ferment Extract



• Increase in Collagen type III synthesis

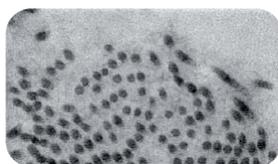
Human Dermal Fibroblasts were treated with a mixture of Hydrolyzed Soy Protein (HSP) and Hydrolyzed Wheat Protein (HWP) at two different concentrations. Collagen III was detected using an ELISA test with monoclonal antibodies.



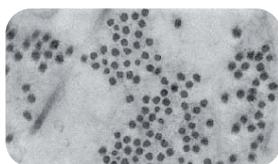
2. COLLAGEN ORGANISATION

• Dermal Collagen fibrils study

Tissues from a tridimensional human skin model were treated with Tripeptide-10 Citrulline 0.01%. Tissues were sectioned and then observed by Transmission Electron Microscopy.



Control (Untreated)



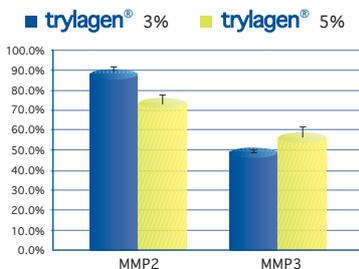
Tripeptide-10 Citrulline

3. COLLAGEN PROTECTION

• Human MMPs inhibition activity

The aim of this study was to determine the selectivity of trylagen® versus human MMPs: MMP-2 and MMP-3.

The fluorescence released by quenched gelatin (denatured collagen) when digested with MMPs was monitored.



128% increase of Collagen I synthesis after 15 days

Type I collagen fibrils have a great tensile strength and elastic resistance.

81% increase of Collagen IV synthesis after 15 days

Type IV collagen is the most abundant structural component of basement membranes.

Collagen III production tripled at the highest dose

Youthful skin contains a predominance of collagen III, but during the aging process, cells gradually lose their ability to produce this type of collagen.

trylagen® controls collagen fibril dimensions by uniformising their diameter and regular spacing

This function provides a better cohesion and stabilisation of collagen fibres, and gives suppleness to the skin.

74% inhibition of MMP-2 and 57% inhibition of MMP-3 at the recommended dose

Its anticollagenase activity protects collagen from degradation and avoids excessive collagen damage in aged skin.

In vivo efficacy

• Anti-wrinkle effect

Panel of 20 female volunteers, aged 35 to 55.

A cream containing 5% trylagen® was applied twice daily on one side of the face (around the eye), and a placebo cream on the other side, during 30 days. The depth of the wrinkles was examined by means of the optical 3D measurement PRIMOS.



0 days



30 days

29% decrease in wrinkle depth after 30 days