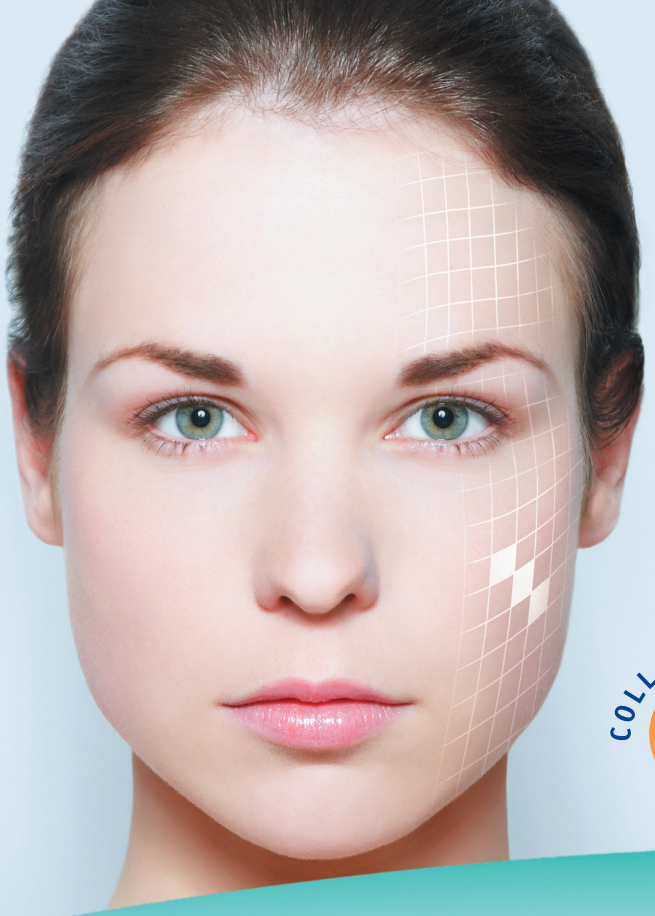
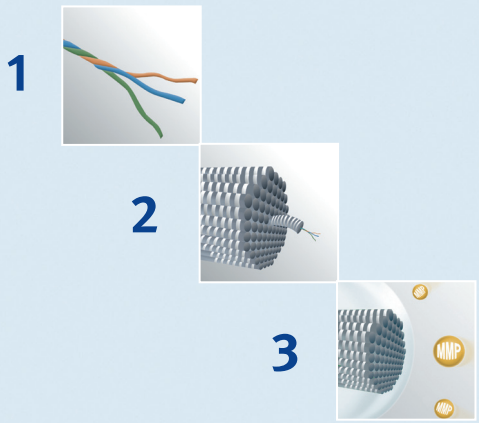


trylagen®

A trifunctional ingredient for an integral collagen treatment



Boosts collagen synthesis

Uniformises fibril diameter and spacing

Inhibits enzymatic destruction

anti-wrinkles

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.

Please contact us for information on the preservative system.

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

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.

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

Dosage 1-5%

Solubility Water soluble.

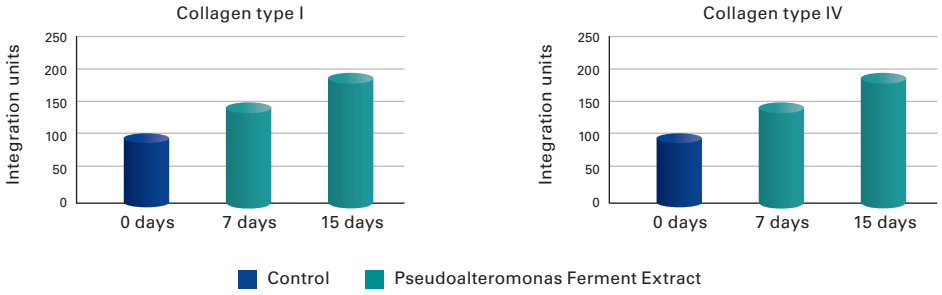
In vitro efficacy

trylagen®

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.

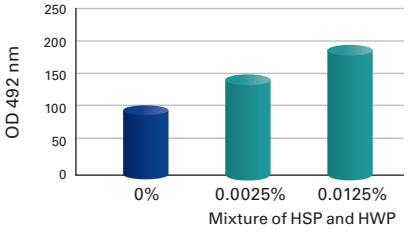


128% increase of collagen I synthesis after 15 days
Type I collagen fibrils have a great tensile strength and elastic resistance.

81% increase of collagen IV synthesis after 15 days
Type IV collagen is the most abundant structural component of basement membrane.

• 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.

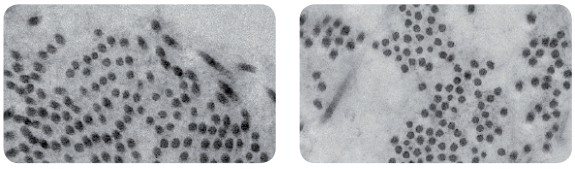


Collagen III production tripled at the highest dose
Youthful skin contains a predominance of collagen III, but during the aging process, cells gradually lose their ability to produce this type of collagen.

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.



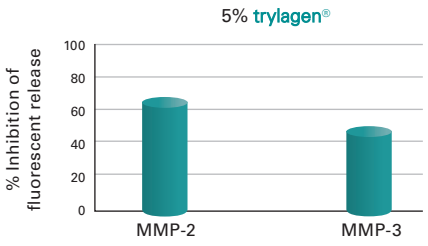
Control (untreated) | Tripeptide-10 Citrulline

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.

3. COLLAGEN PROTECTION

• Dermal collagen fibrils study

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.



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, for 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

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Lipotec Group

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