



# eyeseryl<sup>®</sup>

peptide

A tetrapeptide with a demonstrated efficacy against puffy eyebags

**Significant decrease in only 14 days**

**Double action: reduction of puffy eyebags and dark circles**

**Improvement of skin elasticity**



#### Description

Tetrapeptide with anti-oedema properties with a proven efficacy in reducing puffy eyebags.



#### Appearance

Transparent solution containing 0.1% active ingredient.

#### INCI

Water (Aqua), Acetyl Tetrapeptide-5.

Please contact us for information on the preservative system.

#### Properties

Anti-eye bag and anti-dark circle activity, with a draining and decongesting effect.

#### Applications

**eyeseryl<sup>®</sup> peptide** can be incorporated into cosmetic formulations where a reduction of puffiness under the eyes is desired.

#### Science

As skin loses its elasticity and muscles weaken through age, loose skin can accumulate around the eyes, forming eyebags. Water accumulation is another reason for puffy eyes, also known as eyelid oedema. This accumulation is due to several vascular diseases, such as a poor lymphatic circulation or an increased capillary permeability. **eyeseryl<sup>®</sup> peptide** fights against oedema-forming mechanisms and shows a decongesting effect, enhancing elasticity and skin smoothness.

#### Dosage 1-10%

#### Solubility

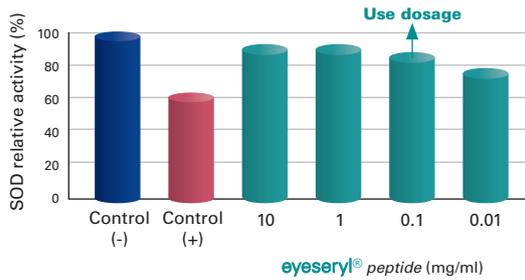
Water soluble.



# In vitro efficacy

## 1. GLYCATION INHIBITORY ACTIVITY

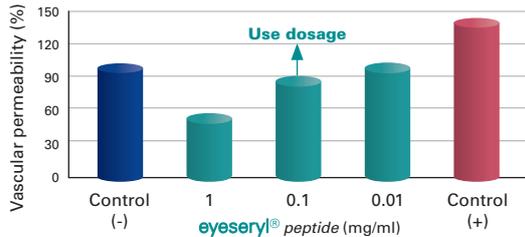
Collagen cross-linking, as a result of a glycation reaction, is one of the main causes of the formation of eyebags. The inactivation of SOD (Superoxide Dismutase) by its reaction with fructose is used as a model of glycation.



**eyeseryl® peptide prevents collagen cross-linking**  
Inhibition of collagen glycation avoids losing elasticity and subsequent eyebags formation.

## 2. VASCULAR PERMEABILITY INHIBITION

Test performed in a tissue culture plate using an assay kit, which allows the evaluation of the effects of chemicals on endothelial cell permeability. **eyeseryl® peptide** is able to inhibit vascular permeability in a dose-dependent manner.



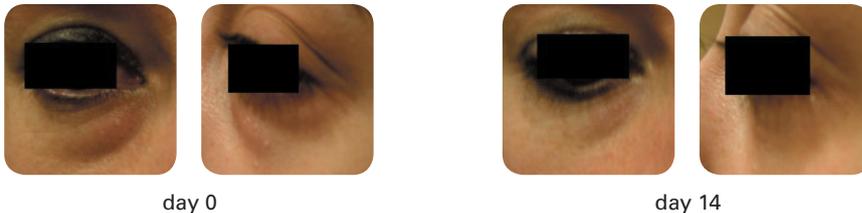
**Draining and anti-oedema effect**  
**eyeseryl® peptide** prevents liquid accumulation in eyebags.

# In vivo efficacy

Group of 20 female volunteers, aged 18 to 65.

Application of a cream containing 10% **eyeseryl® peptide solution** under the eyes twice a day, for 60 days.

## 1. ANTI-EYEBAG ACTIVITY (DERMATOLOGICAL EVALUATION)



**Puffy eyebags reduction in only 14 days**

## 2. SKIN ELASTICITY (QUANTITATIVE EVALUATION)

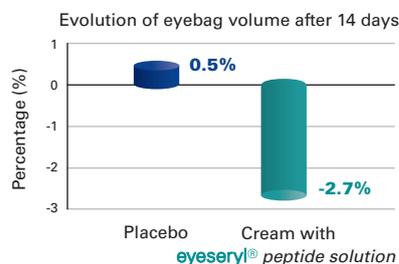
The elasticity measurements were performed with a cutometer. Elasticity represents the recovery degree of the maximum deformation of the skin reached.

**Skin elasticity had a 30% increase after 30 days**

A cream\* containing 1% **eyeseryl® peptide solution** was applied twice a day for 28 days on 17 people, aged 34 to 54. Values were measured after 14 and 28 days.

## 1. VARIATION IN PUFFINESS

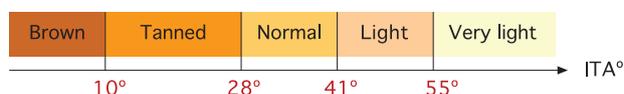
Eyebag volume was measured using a technique called Fringe Projection.



**Eyebags were reduced in 70% of the volunteers after 28 days with 1% eyeseryl® peptide solution**

## 2. ANTI-DARK CIRCLE EFFECT

High resolution photographs of the dark circles were taken under polarised light and chromametry studies were performed. The ITA° (Individual Typological Angle) categorises skin colour.



L\* is luminance which represents relative brightness from total darkness (L\*=0) to absolute white (L\*=100).

**Decrease of dark circles under the eyes**  
ITA° and L\* values significantly increased showing a slight lightening effect.

eyeseryl® peptide solution 10%

eyeseryl® peptide solution 1%

\*Test performed with a customer's formulation.