

# BIOPEPTIDE EL™



THE "SPRING FRAGMENT" OF ELASTIN  
FOR DERMAL RESTRUCTURATION

## BIOPEPTIDE EL™ FUNCTION & CHARACTERISTICS

### Function & Characteristics

Firmness and tone improvement. Hydroglycolic solution of Palmitoyl - Val - Gly - Val - Ala - Pro - Gly titrated at 100 ppm .VGVAPG is a matrikine: a messenger peptide specifically involved in repairing the aged-related skin damage. VGVAPG is the "spring fragment", repeated six times in the whole elastin molecule.

### Cosmetics Interest

BIOPEPTIDE EL stimulates fibroblasts mobility and is particularly active on skin suppleness.

### Properties

Dermal restructuring based on cell communication. The chemotactic effect of VGVAPG potentiates the fibroblasts activity of macromolecules synthesis.

### Applications

Firming products, eye contour products and hand care products.

### Formulation

Water soluble. Incorporate the emulsions at 45°C and the gels at room temperature

### Recommended use level

2% -5%

### CTFA/INCI name

**Glyceryl Polymethacrylate** - A film former and viscosity agent. It is often used in gels because of its strong hydrating power and a very high water absorbing capacity. Glyceryl Polymethacrylate can help to reconstruct the dermis and increase skin firmness and contains a natural fragment of elastin. It can also be used to fight premature aging and maintain the skin's resistance and integrity  
**PEG-8** - The polyethylene glycol ester of Lauric Acid and is used in cosmetics and beauty products as a surfactant , thickener and emulsifying agent.  
**PalmitoylOligopeptide**- This synthetic peptide--meaning it is man-made--consists of the amino acids glycine, glutamine, proline and arginine. Palmitoyl oligopeptide is actually a fragment of collagen that is attached to palmitic acid, which makes it more stable while also enhancing its ability to bind to human skin. The main function of palmitoyl oligopeptide is the restructuring of cutaneous, or skin, tissues. When the synthesis of these proteins is stimulated, the effects are smoother, wrinkle-free rejuvenated-looking skin.

### Specifications

Appearance : opalescent gel  
Colour : colourless  
Odour : characteristic  
pH (sol. at 10%) : 4 - 6  
Refractive index (25°C) : 1.430 - 1.440  
Water content (K. Fischer) : 22 - 28%  
Pal VGVAPG content (HPLC) : 100 - 140 ppm  
Bacteria : < 100 germs/g  
Yeast and moulds : < 10 germs/g

## CLAIM SUBSTANTIATION

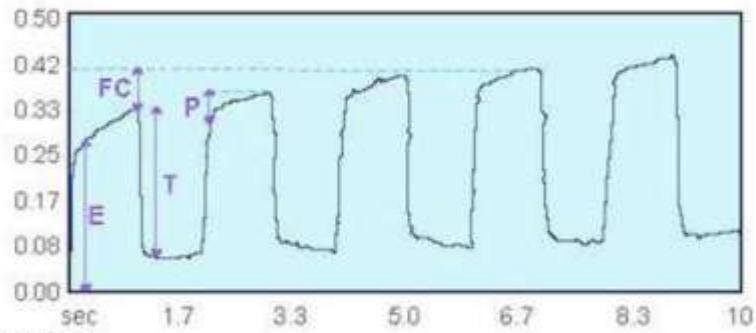
BIOPEPTIDE EL™

### Clinical study

A one month double-blind study was conducted on 10 female volunteers, aged 32 to 56. Twice daily applications of a light emulsion containing 4% BIOPEPTIDE EL against placebo. Elastic extensibility, tone, plasticity, skin fatigue and firmness parameters were measured using a fermometer.

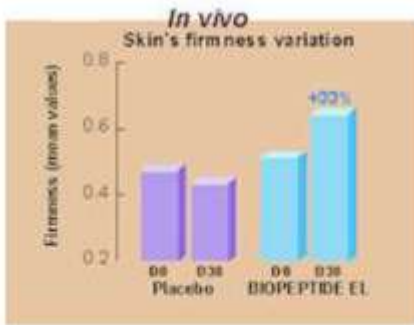


# In vivo tests



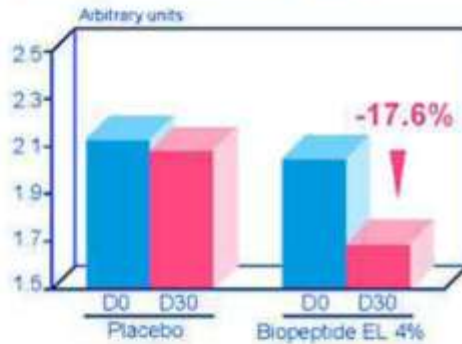
T: Skin tone  
 E: Elastic extensibility  
 FC: Cutaneous Fatigue (slackening)  
 P: Plasticity (flaccid skin)  
 F: Firmness (T/E ratio)

Increase in cutaneous firmness: +24.5%



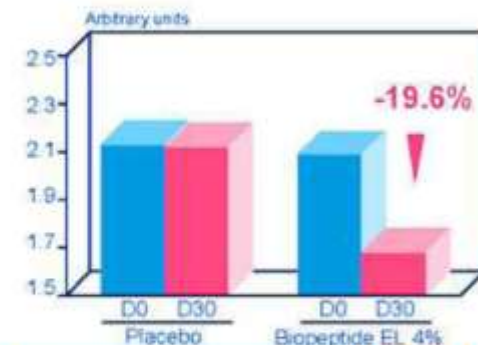
| Parameters | Variation | Max Variations |
|------------|-----------|----------------|
| Skin Tone  | +20%*     | +39%           |
| Firmness   | +33%*     | +38 %          |
| Slackening | -17%*     | na             |
| Flaccidity | -19.6%*   | na             |

Decrease in skin plasticity: -17.6%



**BIOPEPTIDE EL™**, which contains a natural fragment of elastin, characteristic of the repeated "spring structure" has a restructuring and repairing activity.

Decrease in skin fatigue: -19.6%



**BIOPEPTIDE EL™** significantly improves firmness and tone of the skin.

## Peptides and Actives are a great way to create your own custom skin care line.

We've all seen specialty serums, face and night creams with prices ranging anywhere from \$70.00 to \$100.00 or more for a 1/2 oz jar. What makes them so special? Great packaging and aggressive marketing work wonders, but the main thing that makes these products stand out from the rest is the use of **Peptides and/or actives**.

We at EBC are well aware that Peptides are among the most intriguing and sought-after skin care ingredients used in successful anti-ageing products today.

Here we offer you BIOPEPTIDE EL™ a patented formulation (FR 2 668 365-FR 2 854 897-US 2004/0120918) from Sederma formulated in France.

### But what are peptides? What do peptides do that other skin care ingredients don't do?

Peptides are short chains of amino acids. Amino acids are the basic building blocks of proteins and many other different types of organic molecules. Peptides are frequently created by the digestion of proteins in the body, and many types of peptides are readily and rapidly absorbed by the bloodstream. For this reason, peptides are particularly effective as skin care ingredients.

Many peptides work as hormones, neurotransmitters and as natural pain relievers.

**What do peptides do?** Different peptides have different effects. Peptides are a widely variable group of molecules, so speaking generally about the function of peptides is meaningless. Simply, there are four powerful peptides used in skin care products: acetyl hexapeptide-3, palmitoyl pentapeptide-3, palmitoyl oligopeptide and copper peptides. Here we will briefly discuss the function of Palmitoyl - Val - Gly - Val - Ala - Pro - Gly which is the peptide in BIOPEPTIDE EL™.

**Palmitoyl - Val - Gly - Val - Ala - Pro - Gly:** this member of the peptides creates a response in the dermis of the skin that stimulates collagen and elastin fibroblasts, developing fibronectin (FN) and glycosaminoglycans (GAG). It is believed to work by reducing the production of interleukin-6 (IL-6) by the the key skin cells, keratinocytes and fibroblasts. IL-6 is a molecule that promotes inflammation, which, in turn, leads to faster degradation of the skin matrix and thus contributes to the development of wrinkles and loss of skin firmness and elasticity. By reducing the levels of IL-6 and possibly other inflammation mediators, palmitoyl is thought to slow down the degradation of the skin matrix and may also stimulate its replenishment.

**How do I use it?** As stated in the studies above add directly to your emulsions (lotion and creams, etc) at 45°C and into gels at room temperature. Use at a level of 2%-5%.

**Special Note:** Looking for the ultimate combination of Biopeptides that will restructure the dermal matrix causing firming and anti-wrinkle action while increasing suppleness. A combination of both [Biopeptide CL \(collagen\)](#) and [Biopeptide EL \(elastin\)](#) will boost results considerably! Both are available here at [Essentials by Catalina](#).

**BIOPEPTIDE EL™ is sold by weight in gel liquid form.**