Pal-GHK, Pal-VGVAPG & bacterial filtrate

#### **Function:**

Deeply restructures and dynamises the skin.

Enhances bust firmness and tone.

### **Definition:**

Association of a biotechnological bacterial filtrate, rich in growth factors, and two lipopeptides (Pal-GHK, fragment of collagene and Pal-VGVAPG, "spring" fragment of elastine).

#### **Properties:**

Stimulates cell metabolism, promotes collagene synthesis and enhances fibroblasts proliferation.

# **Characteristics:**

Synergistic action of the three active ingredients provides the bust with a global firmness efficiency.

## **INCI Name:**

Water (Aqua) – Rahnella / Soy Protein Ferment – Glycerin – Propylene Glycol – PEG-8 – Glyceryl Acrylate/ Acrylic Acid Copolymer – Palmitoyl Oligopeptide

## **Applications:**

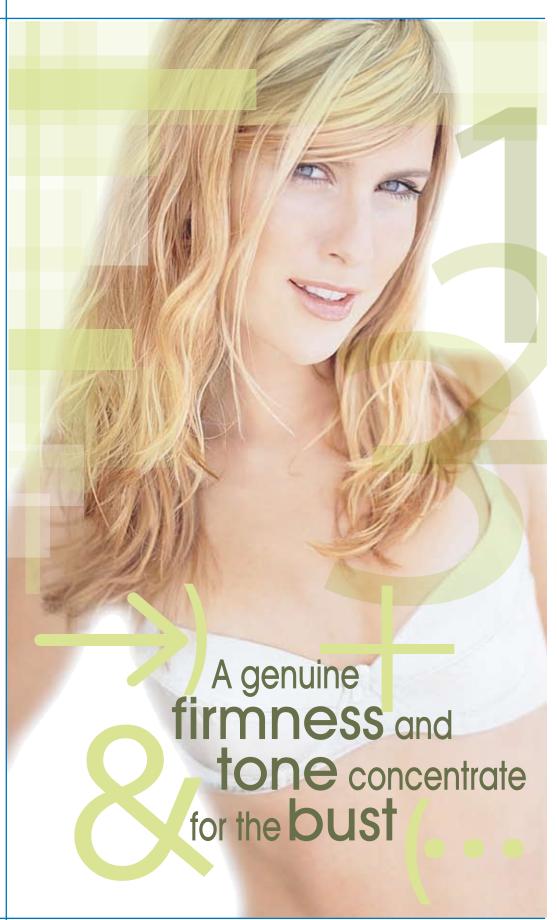
Body and bust care. Firming and energizing treatments.

# Formulation:

Water soluble.

## Recommended use level:

3 to 6%









# In vitro tests

# Energizing effect

Measurement of oxygen consumption in a liver cell suspension in presence of 2% Bio-bustyl™ using a Clark type electrode.

Stimulation of cell respiration

+103%

# Densifying effect

Measurement of collagen synthesis on fibroblast in presence of Pal-GHK.

Stimulation of collagen synthesis

# Stimulating effect

Measurement of cell growth on fibroblast culture presence of increasing concentration of BiobustyI™.

Stimulation of cell proliferation:	
- with 0.5% Bio-bustyl™	+10%
- with 1% Bio-bustyl™	+42.5%
- with 5% Bio-bustyl™	+77.5%

# **In vivo tests: firming and tonifying effect**

14 volunteers / Twice daily application to the bust of an emulsion containing 4% Bio-Bustyl™ versus placebo, for 30 days.

Measurement with fermometer.

The fermometer generates repeated depressions in a small zone of skin. The deformation of the teguments is followed and recorded. The successive aspirations effected on a same site allow to extract the following parameters: tone, firmness and skin fatigue.

Increase of tone	+13%
Increase of firmness	+18.5%

# In vivo Measurement of skin fatigue Units (x100) 4% Bio-bustyl™ Placebo 6,5 6 5,5 -16.2% 5 D<sub>0</sub> **D28** Bio-bustyl™ decreases skin fatigue

# **Formulation**

Potassium sorbate

# **Firming Cream for the Bust** with Bio-BustvI™

Part A	%
Deionised water	qs 100
Ultrez 10 (Carbomer, Noveon)	0.40
Part B	%
Glycerin	5.00
Preservatives	qs
Part C	%
Crodamol GTCC (Triglyceride C8C10, Croda)	4.00
Crodacol CS90 (Cetearyl Alcohol, Croda)	0.50
Crodamol ML (Myristyl Lactate, Croda)	0.30
Crillet 1 (Polysorbate 20, Croda)	1.00
Part D	%
Cyclomethicone	2.00
Pemulen TR2 (Acrylates / C 10-30 Alkyl Acrylate Cross Polymer, Noveon)	0.20
Part F	%

Deionised water	6.00
Sodium hydroxide 30%	0.60
Part G	%

Formulation Ref.: SED0207315 At

Part G	%
BIO-BUSTYL™ (Sederma)	4.00

#### **Protocol**

Part F

Part A: sprinkle Ultrez 10 in the water and let swell for 15 minutes. Heat Part B until dissolution and add it to Part A. Weigh Part C and heat to 75°C in water-bath. Heat Part (A+B) to 75°C in water-bath. Weigh Part D. Add Part C to Part (A+B) and Part D extemporaneously. Then add part E. Neutralize with Part F at around 45°C. Finally, add Part G. Homogenize carefully.

Non-guarantee:
This formulation has been subjected to limited stability tests and has been shown to perform well. However formulators adopting this approach should ensure to their own satisfaction long term stability and functionality. It is good practice to conduct safety tests on all final formulations prior to marketing. Suggested uses should not be taken as an inducement to infringe any existing patents.

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