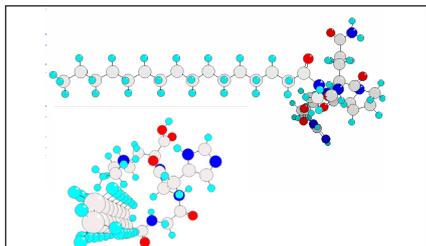




Patented

MATRIXYL™3000



Pal-GHK and Pal-GQPR

Function:
Anti-wrinkling and lifting effect

Definition:
Matrixyl™3000 contains two matrikines™, Pal-GHK and Pal-GQPR which act in synergy to restore and maintain skin's youthful appearance.

Properties:
Matrixyl™3000 contains matrikines which are messengers of cutaneous restructuring and repair. They activate the neosynthesis of extracellular matrix macromolecules providing Matrixyl™3000 with a visible anti-wrinkle efficacy.

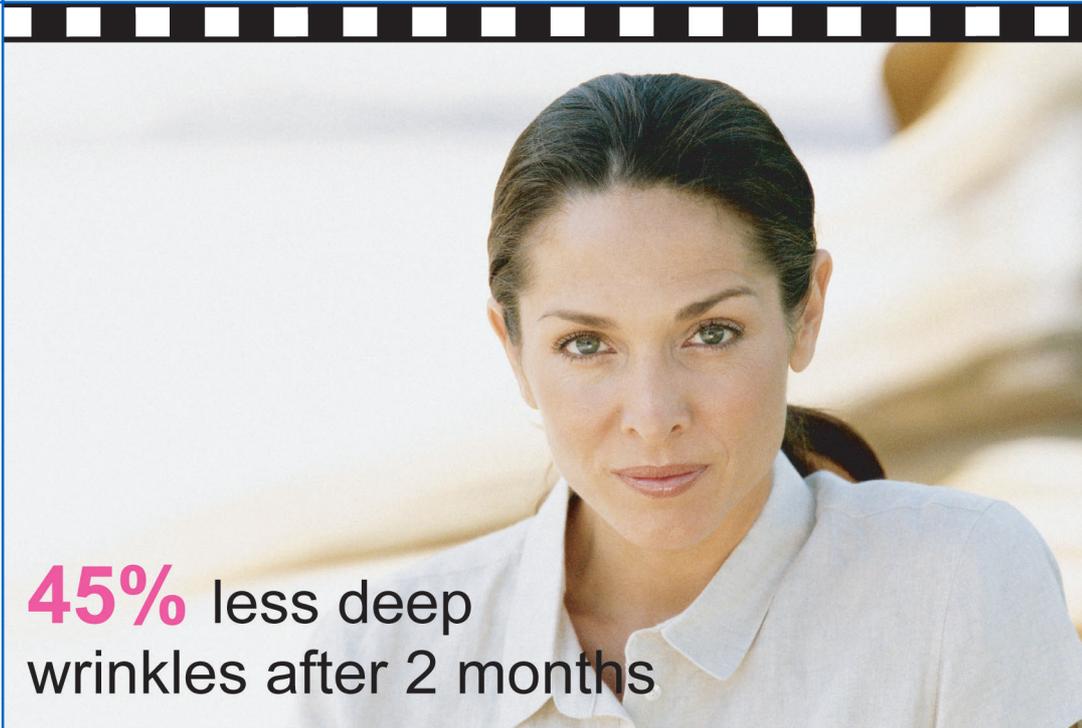
Characteristics:
As messenger molecules, matrikines™ are capable of regulating cell activities. They interact with specific receptors to activate certain genes involved in the process of extracellular matrix renewal and cell proliferation. With age these mechanisms become progressively weaker.

INCI Name:
Glycerin - Butylene Glycol - Aqua (Water) - Carbomer - Polysorbate-20 - Palmitoyl Oligopeptide - Palmitoyl Tetrapeptide-3

Applications:
Anti-aging, face lifting and wrinkle treatment products. Suitable for gels, serums, lotion, creams.

Formulation:
Water soluble

Recommended use level:
3 to 8%



45% less deep wrinkles after 2 months



Eternal youth



Sederma - member of Croda International Group



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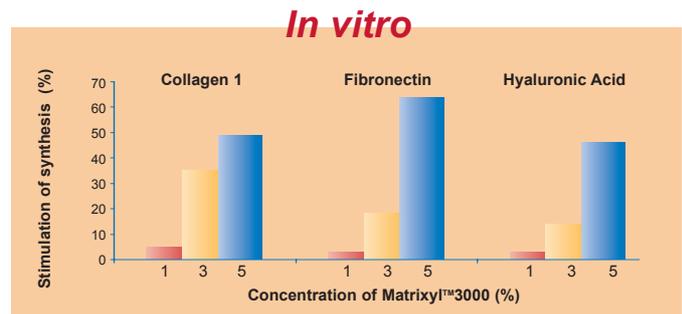
in vitro tests

- **Synthesis of matrix macromolecules**

Study to determine ability of fibroblasts incubated for 72 hours with Matrixyl™3000 (1, 3, and 5%) to stimulate synthesis of extracellular matrix components.

- **Stimulation of gene expression**

Study to evaluate regulation of dermal and epidermal genes by matrikines present in Matrixyl™3000, using DNA-Array techniques on a reconstructed epidermis and a fibroblast culture.



The profile of gene activation by the matrikines™ in Matrixyl™3000 complement the skin's natural mechanisms for cutaneous restructuring.

in vivo tests

- **Visible and measurable proof of anti-wrinkle efficacy**

Clinical study in which 2 panels of 23 volunteers aged 39 to 74 applied a cream containing 3% Matrixyl™3000 to one-half of their face against a placebo or 3% Matrixyl™ on the other half twice a day for 56 days. Anti-wrinkling and lifting efficacy was assessed by profilometry and photography, as compared to T0.

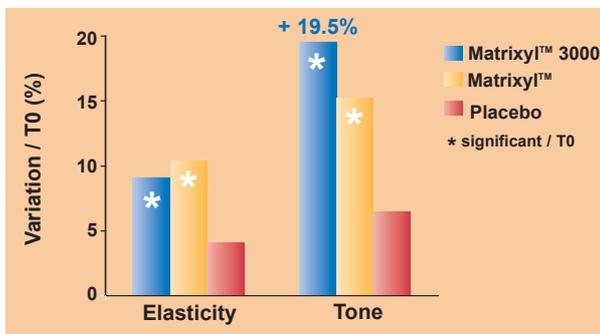
Variation of parameters compared to T0 (%)

	Matrixyl™3000	Matrixyl™	Placebo
Surface occupied by deep wrinkles (>200µm)	- 44.9**	-27.7**	4.3 ^{ns}
Main wrinkle density	- 37.0**	-27.3*	-9.6 ^{ns}
Main wrinkle average depth	- 15.1**	-9.8**	-3.2 ^{ns}
Main wrinkle average volume	- 18.5**	-14.7**	-8.7*
Roughness	- 14.4**	-10.8**	1.4 ^{ns}
Complexity (Lifting effect)	- 16.6**	-12.7**	4.2 ^{ns}

ns : non significant *significant / T0 (p<0.05) **significant /T0 (p<0.01)

- **Effect on skin elasticity and tone**

Assesment of elasticity and tone by cutometry using the same panel as above.



Matrixyl™3000 displays major and significant improvements in elasticity and tone.

In vivo

