



# MATRIXYL®3000



Pal-GHK and Pal-GQPR

**Function:**

Anti-wrinkle.

**Definition:**

Association of 2 palmitoylated matrikines:  
Pal-Gly-His-Lys and Pal-Gly-Gln-Pro-Arg.

**Properties:**

Matrixyl®3000 supports the activation of the cutaneous repair process, and in particular at the level of the fragile and UV-damage prone papillary dermis. Matrixyl®3000 promotes wrinkle smoothing and improves tone and elasticity.

**Characteristics:**

Matrikines are messenger peptides capable of regulating cell activities by interacting with their specific receptors. They activate certain genes involved in the process of extracellular matrix renewal and cell proliferation. These mechanisms become weaker and weaker with age.

**Point of interest:**

Matrixyl®3000 regulates the expression of progerin, a senescence marker known to accumulate with age, whereas it maintains its normal form lamin A.

**INCI Name:**

(Check PCPC on-line dictionary for latest INCI name)

Glycerin – Aqua (Water) –  
Butylene Glycol – Carbomer –  
Polysorbate 20 – Palmitoyl Tripeptide-1\*  
– Palmitoyl Tetrapeptide-7  
Preservatives free\*

\*former INCI name: Palmitoyl Oligopeptide

**Applications:**

Anti-wrinkle products.

**Formulation:**

Water soluble.

**Recommended use level:**

3%

**Patent:**

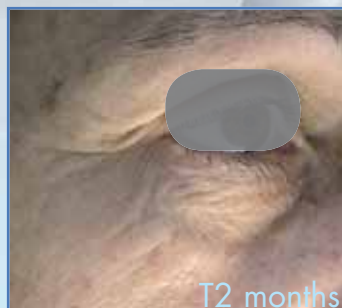
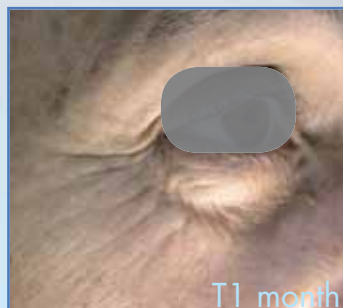
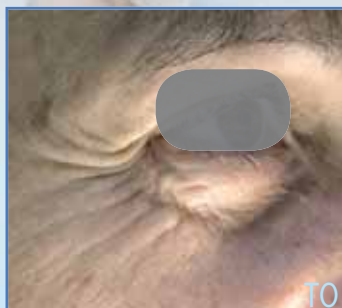
WO 2005/048968

## Restores skin's metabolism of youth

New study reconfirms previous findings



[www.matrixylinside.com](http://www.matrixylinside.com)

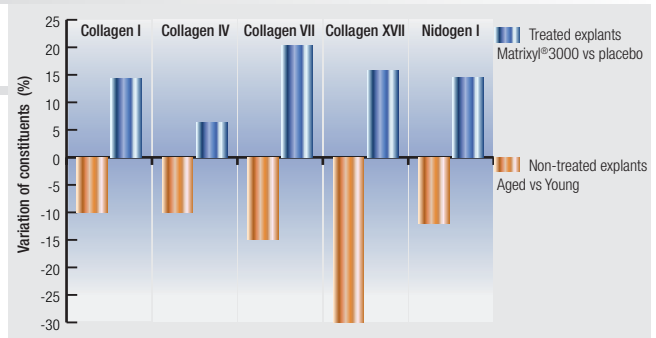


[www.sederma.fr](http://www.sederma.fr)  
E-mail: [sederma@sederma.fr](mailto:sederma@sederma.fr)  
Copyright© 2000-2013  
Sederma. All rights reserved.

Member of Croda International Plc

## Ex vivo tests

Quantification of constituent, anchorage and cohesion proteins of the dermis and dermal-epidermal junction on skin explants (n=10, from 30 to 66 years).



## In vitro tests

### REGULATION OF SENEESCENCE MARKERS

Study on senescent fibroblasts with Matrixyl®3000 eq 5%

- SA β-galactosidase (fluorescence method) ..... -56%, p<0.01
- Progerin (RNA expression) ..... -27%, p<0.05
- Lamin A (RNA expression) ..... +4%, ns

With Matrixyl®3000, ageing skin tends to behave like young skin.

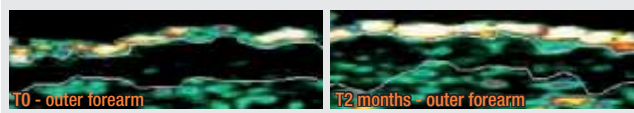
## In vivo tests

### REPAIR OF THE PAPILLARY DERMIS

28 female volunteers aged from 51 to 72 years, mean age 59. Twice daily application of a cream containing 3% of Matrixyl®3000 for 2 months to one half of the face and the forearm (inner and UV-exposed outer forearm) against placebo.

#### ANALYSIS OF THE SUBEPIDERMAL LOW ECHOGENICITY BAND

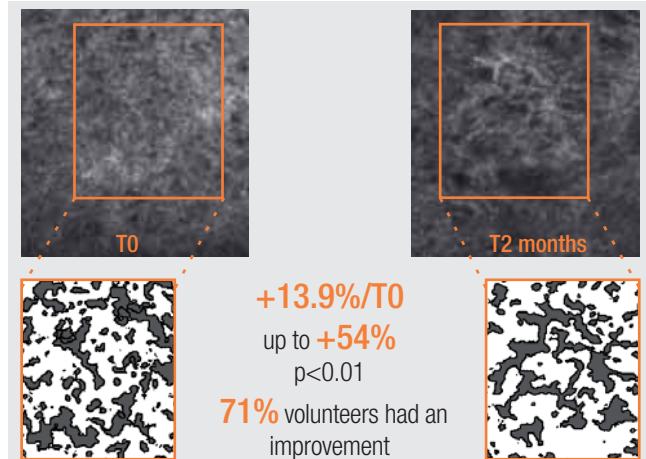
after 2 months	Inner forearm	Outer forearm
<b>THICKNESS</b>	-9.8%/T0 up to -23%, p<0.01 93% volunteers	-9.8%/T0 up to -33%, p<0.01 86% volunteers
	-11%/placebo, p<0.01	-14.4%/placebo, p<0.01
<b>DENSITY</b>	+11.4%/T0 up to +44%, p<0.01 68% volunteers	+11.5%/T0 up to +45%, p<0.01 82% volunteers
	+15.2%/placebo, p<0.01	+15.1%/placebo, p<0.01
<b>AGE GAIN</b>	-3.8 years	-5.5 years



Significant improvement of the SLEB characteristics in just one month (thickness: -5.5%/placebo; density: +7.8%/placebo, on the inner arm) and confirmed after two months. The ageing process is slowed down by 1.8 years in just one month.

#### ANALYSIS OF THE FIBRE NETWORK

Measurements of the fibre defragmentation by confocal laser microscopy (Vivascope) on the face, next to the external eye corner.



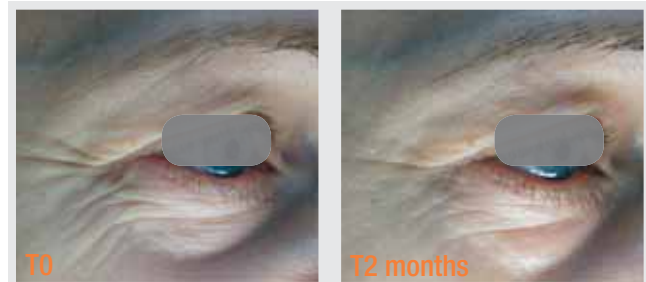
Matrixyl®3000 helps reduce the fibre fragmentation and notably supports the reconstruction of the papillary dermal fibre network.

### ANTI-WRINKLE EFFICACY, SKIN TONE AND ELASTICITY

23 female volunteers aged from 42 to 67 years / Twice daily application on one half of the face of a cream containing 3% of Matrixyl®3000 against placebo, for 2 months. Assessment of the anti-wrinkle efficacy by profilometry, cutometry and photography compared to T0.

Compared to T0 (%)	Matrixyl®3000	Placebo
Surface occupied by deep wrinkles	- 39.4**	4.3ns
Main wrinkle density	- 32.9**	- 9.9ns
Main wrinkle average depth	- 19.9**	- 3.2ns
Main wrinkle average volume	- 23.3**	- 8.7*
Roughness	- 16.0**	- 1.4ns
Complexity (Lifting effect)	- 16.2**	4.2ns
Elasticity	+5.5*	4.1ns
Skin tone	+15.5**	6.5ns

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



The repairing effect of Matrixyl®3000 promotes the visible quality of the skin by decreasing the appearance of wrinkles and improving tone and elasticity.