



# Anti-aging

## Skin Beauty

**5g/day**

Aging of the skin occurs when the epidermis thins, cell renewal slows and collagen is lost or damaged, leading to less moisture, less elasticity and firmness. Contributing factors to skin aging include genes, hormones, UV irradiation, smoking and pollution. All of these factors generate reactive oxygen species that damage the anti-oxidative defense mechanisms of the skin.

**Naticol® collagen peptides offer anti-aging solutions in products affordable enough for daily use.**



**WELL-BEING**



**Naticol® has clinically demonstrated its role as an ingredient in anti-aging applications.**



**CLINICAL STUDY CSR3463 – METHODS AND RESULTS**

This clinical study was double-blind, randomized, against placebo. The objective was to evaluate the anti-aging potential of daily oral intake of 5g of Naticol® fish collagen peptides on cutaneous measures and its tolerance. 5g of Naticol® was mixed with liquid and ingested in the morning. This study was conducted by CPCAD (independent clinical pharmacology center specialized in dermatology from Nice, France) and biomechanical measurements of volunteers were controlled by certified dermatologists. This clinical study was performed according to French regulatory competent authority (ANSM) and approved by the local Ethical Committee (CPP). Consent was obtained from each subject before entry in the study.

› **Skin relief – Visia® CR**

Photographies of the face were taken using a standardized device, the VISIA® CR.

This device allows to take pictures using standardized lighting: white light, cross polarized light, parallel polarized light and UVA light. The replica was lit with incident light at 35° which produced shadowing behind each wrinkle.

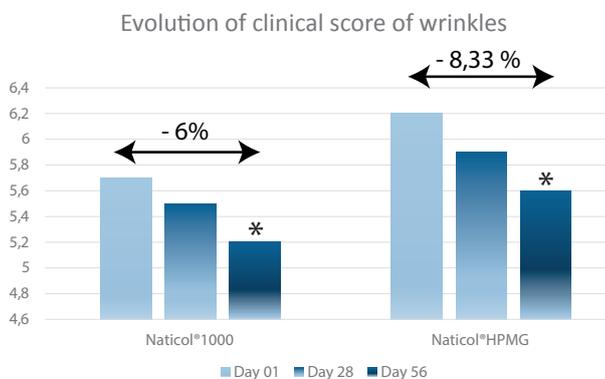


Figure 1- The wrinkles are evaluated using an 11-point clinical scale (Lemperlé: range from 0 to 10).

› **Elasticity - Cutometer SEM 575**

Cutometer® SEM 575 by COURAGE & KHAZAKA was used to measure a deformation perpendicular to the skin during 2 seconds, followed by a relaxation period of 2 seconds.

This method measures the degree of deformation and the time required for the skin to return to its original state. The deformation induced on the skin is measured by an optical system.

The measured parameters are: Ue, the elastic deformation; Ur, the elastic back deformation; Uf the total extensibility of the skin; Ua, the total deformation recovery; Ur/Ue the pure elasticity.

Decrease of the FOREARM skin extensibility (Uf) as a result of a firmer forearm skin, p<0,05

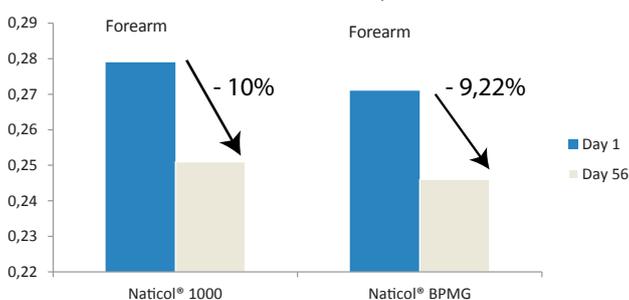


Figure 2 - This figure shows the decrease of the FOREARM skin extensibility (Uf) with Naticol® 1000 and Naticol® BPMG as a result of a firmer forearm skin.

Decrease of the last minimum amplitude R4 on the BELLY skin as a higher belly skin firmness, p< 0,05

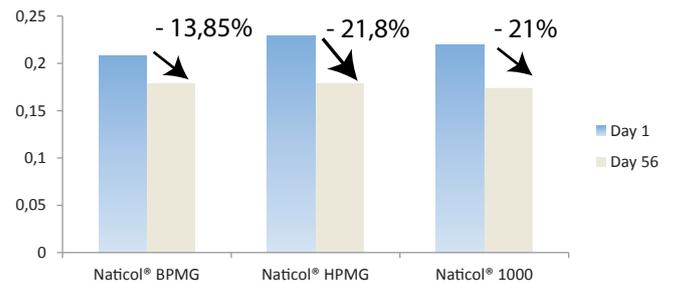


Figure 3- This figure shows the decrease of the last minimum amplitude R4 on the BELLY skin as a higher belly skin firmness.

Residual deformation at the end of the measuring cycle on the face skin, R9 (p<0,05)

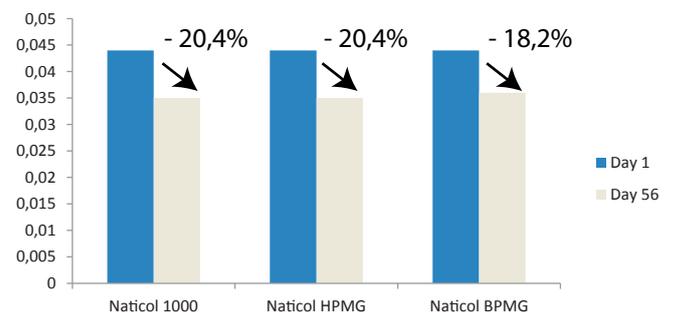


Figure 4- The decrease of residual deformation on the FACE skin at the end of the measuring cycle on the face for Naticol® 1000, Naticol® HPMG and Naticol® BPMG.

› **Tolerance**

It was evaluated through a clinical examination and volunteer's questionnaire. Naticol® presents globally a good tolerance.

› **Conclusion**

The results of oral ingestion of Naticol® on a daily basis, for 8 weeks, clinically show that regular intake of Naticol® Fish collagen peptides should improve skin firmness and reduces wrinkles. They may also indicate a preventive effect of Naticol® products on the skin dehydration due to cold outside conditions.