



Skin beauty

Well-aging benefits of collagen

2,5g/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/IR 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 skin beauty solutions in products affordable enough for daily use.



WELL-BEING



Naticol® has clinically demonstrated its role as an ingredient in Skin beauty applications.



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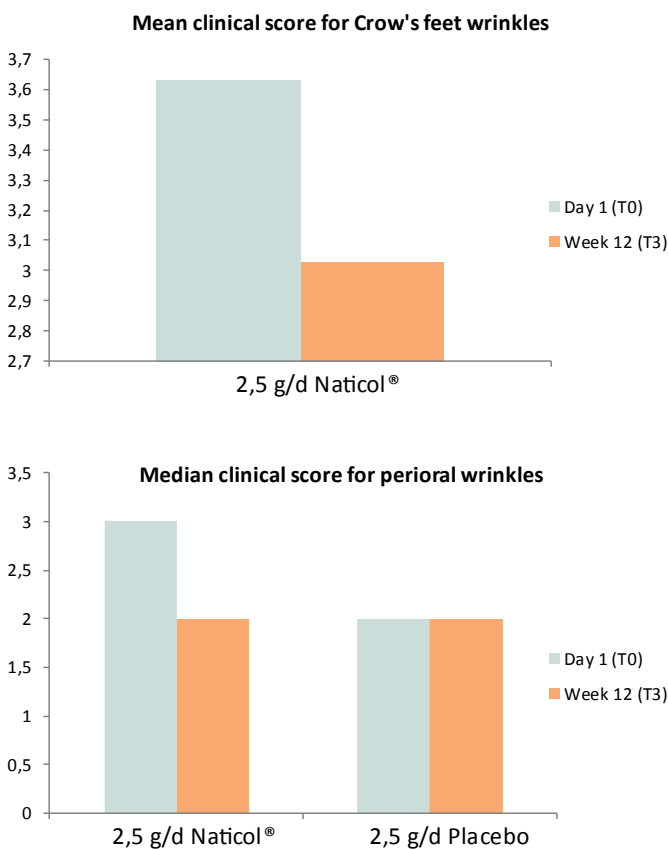
CLINICAL STUDY CSP 3507 - METHODS AND RESULTS

This clinical study was double-blind, randomized, against placebo. It was carried on 95 healthy female subjects, mean-aged 55,6 y.o, for 12 weeks. The objective was to evaluate the anti-aging potential of a daily oral intake of 2,5g of Naticol® fish collagen peptides on cutaneous measures and its tolerance. 2,5g of Naticol® powder was mixed with water and ingested in the morning. This study was conducted by CPCAD / Hospital of 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.

› **Clinical score of wrinkles**

Clinical evaluation of facial wrinkles was performed by a trained clinician using Bazin-Doublet's atlas.



Figures 1 & 2 - Change from baseline in clinical scores for facial wrinkles (Crow's feet and perioral).

The clinical assessment of the perioral and Crow's feet wrinkles compared with baseline showed a significant decrease of the mean score of facial wrinkles at week 12.

At Week 12, an improvement in crow's feet wrinkles was observed for more than 70% of the subjects in the 2.5g/d Naticol® treated groups. As well, about 60% of the subjects showed an improvement in perioral wrinkles in 2.5g/d Naticol® group.

› **Elasticity - Cutometer SEM 575**

The Cutometer® DUAL probe (Courage and Kazhaka, Köln, Germany) using a suction method measured a deformation perpendicular to the skin surface. A negative pressure of 450 mbars was applied to the skin through the probe for 2 seconds, followed by a relaxation period of 2 seconds. This cycle was performed 5 times. 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.

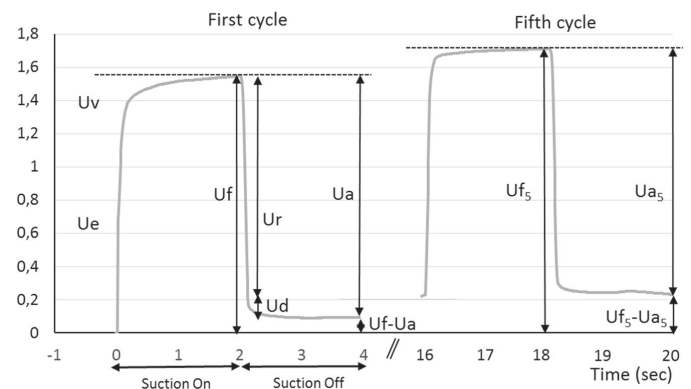


Figure 3 - Skin deformation curve as a function of time (five cycles of 2sec deformation/2sec relaxation)

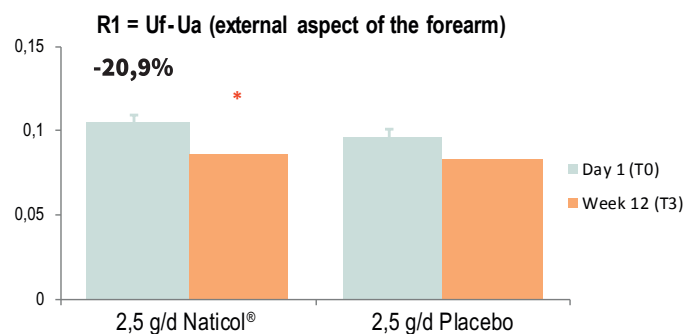


Figure 4 - Mean change from baseline in ability to return to original state (R1) on the external forearm

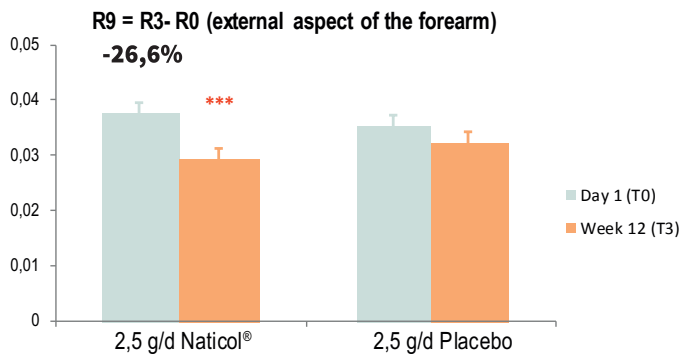


Figure 5 - Mean change from baseline in residual deformation at the end of the measuring cycle (R9) on the external forearm.

A significant increase in skin firmness on the external part of the forearm was observed at Week 12 for 2,5g/d Naticol® while no significant changes over time were observed in the placebo group.

› Skin radiance and skin complexion homogeneity

A visual analogic scale (VAS) was used by a trained clinician to assess the level of skin radiance between 0 (very dull skin) and 10 (very radiant skin). At the same manner, a visual analogic scale (VAS) was used to assess the level of skin complexion homogeneity between 0 (very heterogeneous complexion) and 10 (very homogeneous complexion).

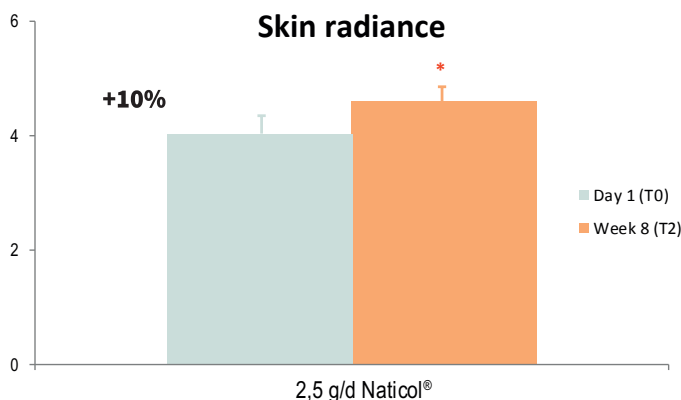
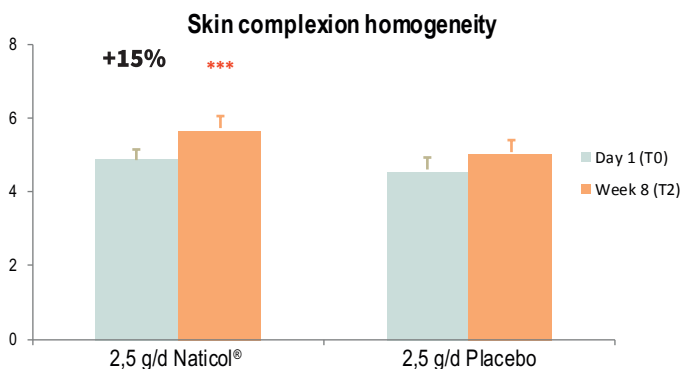


Figure 6 & 7 - Change from baseline in clinical assessment of skin complexion homogeneity and radiance.

Skin radiance and skin complexion homogeneity were statistically significantly increased for 2,5g/d Naticol® after Week 8 while no significant change was seen in the Placebo group.

› 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 2,5g Naticol® on a daily basis, up to 12 weeks, clinically showed that regular intake of Naticol® may improve skin elasticity and reduce facial wrinkle appearance. In this study, skin complexion homogeneity and radiance were also significantly improved after 8 weeks.

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These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.