

Proven skin health benefits from GELITA

Orally administered collagen peptides show beneficial effects on skin elasticity, reduce wrinkles and improve cellulite morphology

Most of us begin life with healthy, flawless skin. However, environmental, internal and hereditary factors, as well as the normal process of aging, proceed to undo what was ours at birth. Healthy skin is usually described as being smooth, hydrated, firm and tight. Collagen plays an essential role in keeping skin healthy as we age. Along with elastin and proteoglycans, it is produced in the deeper layer of the skin, the dermis, and together, these molecules play a key role in skin elasticity and resistance. Collagen, in particular, is what gives the skin its firm structure.

As beauty and aging is an important issue for many consumers, beauty-from-within concepts based on collagen peptides offer a number of opportunities in the growing nutricosmetic markets. According to Global Industry Analysts, the worldwide nutricosmetic market will reach \$4.24 billion by 2017¹. Thus, GELITA's innovative VERISOL® ingredient for beauty-from-within applications has huge potential — especially for female consumers who place great emphasis on their appearance.

Supported by science

With today's consumers being better educated regarding the correlation between nutrition and health, they are also keen to understand how beauty-from-within products work. This means higher levels of interest in products with the greatest amount of scientific research and evidence to support them. GELITA's philosophy of substantiating all product functionalities on solid science makes the company the preferred supplier for skin health products. Recently, three clinical studies have been published that prove the effects of VERISOL® collagen peptides on skin elasticity, wrinkle reduction and cellulite treatment.



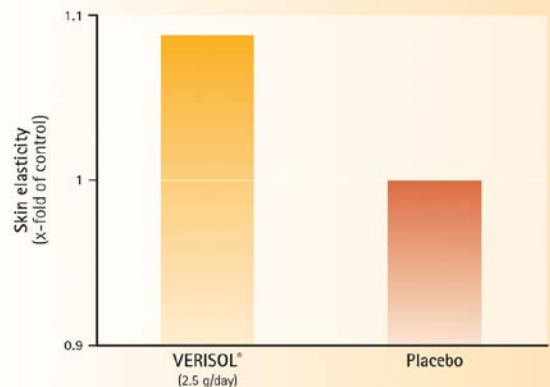
¹ Global Industry Analysts (GIA) „Nutricosmetics: A Global Strategic Business Report” (September 2011)

Improved skin elasticity

The first clinical study was designed to verify the effectiveness of VERISOL[®] collagen peptides on biophysical skin parameters related to cutaneous aging. In a double-blind, placebo-controlled trial, 69 women aged 35–55 were randomized to receive 2.5 g or 5.0 g of VERISOL[®] or a placebo once a day for 8 weeks. Each treatment group included 23 subjects.

Skin elasticity in both VERISOL[®] groups showed a statistically significant improvement compared with the placebo group after only 4 weeks of treatment. In some women, a maximum increase in skin elasticity of up to 30% was observed after the 8-week treatment period. Interestingly, the positive impact of VERISOL[®] treatment on skin elasticity was more pronounced in women aged 50 years and older. With regard to skin moisture and skin evaporation, the collagen peptide treatment's positive influence was also seen among this age group.

Skin elasticity increased significantly after oral VERISOL[®] treatment in comparison to placebo administration.

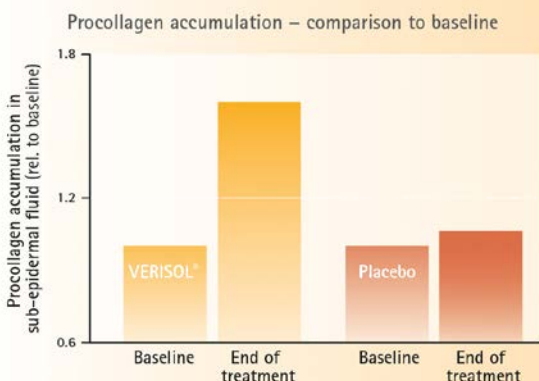


The positive effect on skin elasticity was still detectable at the end of the 4-week washout phase, suggesting a long-lasting dermal physiological effect.

Wrinkle reduction

The second study demonstrated the effectiveness of VERISOL[®] on wrinkle reduction and the synthesis of important dermal matrix components such as type I collagen, elastin and fibrillin. In a double-blind, placebo-controlled trial, 114 women aged 45–65 were randomized to receive 2.5 g of VERISOL[®] or a placebo, once daily, for 8 weeks. Each group comprised 57 subjects.

VERISOL[®] significantly reduces wrinkles:
The collagen in the skin increases by 60%.



After 4 weeks of treatment, the VERISOL[®] group showed a significantly reduced eye wrinkle volume of more than 7%. This positive effect was more pronounced after 8 weeks of intake, with some subjects achieving a maximum reduction in eye wrinkle volume of 50%. Four weeks after the last dose, the VERISOL[®] treatment group still showed a statistically significant decrease in eye wrinkle volume of 11.5%.

The study also found that pro-collagen type I was increased by 65%, elastin by 18% and fibrillin by 6% after 8 weeks of VERISOL[®] treatment. These findings clearly demonstrate that VERISOL[®] has a

positive impact on important dermal macromolecules that have a direct influence on skin elasticity and wrinkle formation.

Effective cellulite treatment from within

The third study investigated the ability of GELITA's VERISOL® to treat cellulite in normal and overweight women. In the double-blind, placebo-controlled study, 105 women between 24 and 50 years of age received a daily dose of 2.5 g of VERISOL® collagen peptides or a placebo (maltodextrin). In both treatment groups, the subjects were classified as being of normal weight or overweight, depending on their BMI.

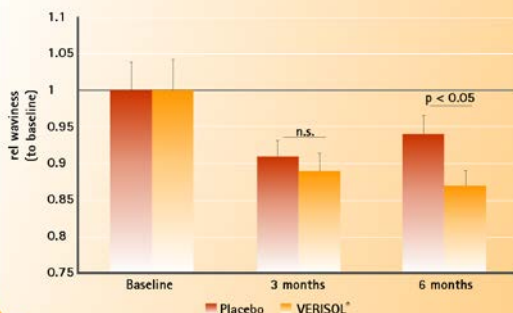
The subject's cellulite was assessed both visually and by using the so-called pinch test. After only 3 months of treatment and compared with the baseline readings, a statistically significant cellulite score reduction was observed. At the end of the 6-month study period, a mean reduction of approximately 9% (compared with the placebo) was determined in subjects with a normal BMI. This improvement was also recorded in overweight participants with a BMI of >25, although the beneficial effect was less pronounced (4% reduction).



In terms of skin waviness, an average and statistically significant reduction of 8% was observed via 3D skin surface profile measurement after 6 months of treatment. This

was even more pronounced in the normal BMI study group, with a decrease in thigh skin waviness of 11.1%. Moreover, dermal density was significantly improved compared with the placebo. After the treatment period, the skin tissue became measurably more compact, indicating a strengthening of the connective tissue. Finally, the borderline length between the dermis and the subcutis was notably shorter after collagen peptide supplementation. As the length of the borderline correlates with the degree of cellulite, this measurement also highlights cellulite reduction after 6 months.

Statistically significant reduction of skin waviness



Women trust collagen

Besides its scientifically proven efficacy, VERISOL® is also completely safe. It is exceedingly well tolerated and no adverse reactions have been noted. This fact is also reflected in consumer research²: a total of 500 women aged 25 to 65 years were interviewed in Germany, Spain and the USA about their perceptions and acceptance of the natural ingredient VERISOL® and products containing it. VERISOL® and its effects were presented in the form of neutral verbal statements. The survey found that more than 80% of the participants associated collagen with beauty, specifically in relation to connective tissue and elasticity. In general, most of the interviewees considered a beauty-from-within concept based on VERISOL® to be trustworthy and more effective than topical applications. The majority of the women were familiar with the term “collagen,” positively associating it with antiaging and perceiving it to be natural.

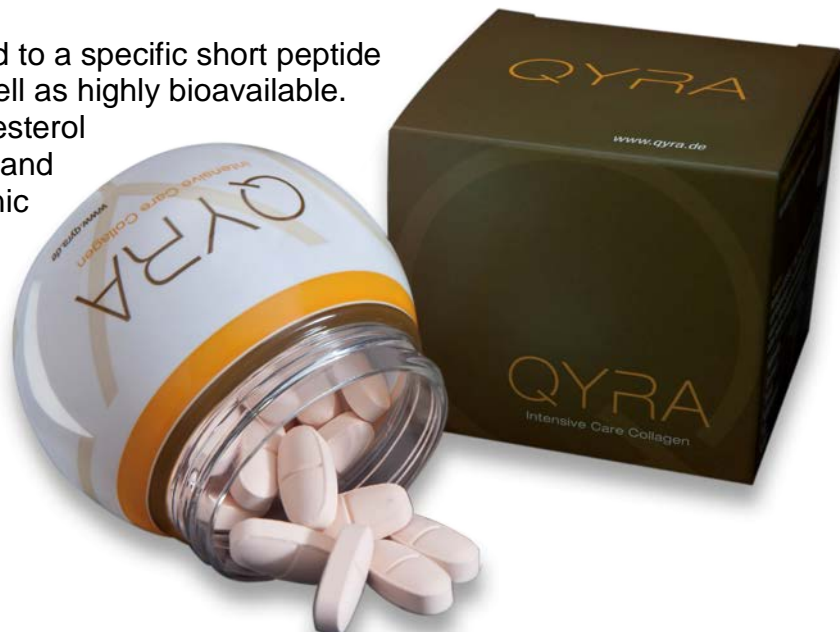
Furthermore, the women interviewed had clear ideas about the ideal application forms of such nutricosmetics: the ingredients should be easy to consume, readily absorbed by the body and neutral in taste and odor. VERISOL® bioactive collagen peptides fulfill all of these requirements, having been specifically developed for beauty-from-within applications.

Almost unlimited application forms

GELITA's manufacturing process ensures that VERISOL® is highly soluble and almost neutral in taste. Hence, it can easily be incorporated into various types of liquid and solid functional food applications or nutricosmetics without compromising the sensory profile — from collagen water and concentrated ready-to-consume liquid shots to tablets, capsules and flavored powder mixes. Even luxury foodstuffs such as coffee drinks and chocolate can be enriched with natural collagen peptides, allowing for beauty care with a touch of great-tasting indulgence.

As VERISOL® peptides are hydrolyzed to a specific short peptide length, they are easily digestible as well as highly bioavailable. Moreover, they are free from fat, cholesterol and carbohydrates, as well as gluten, and perfectly suited for use in non-allergenic foods. The nutricosmetic concept is also free from E-numbers, making it ideal for the development of clean label products too.

www.GELITA.com



² Institut für Zielgruppenforschung (IfZ) „Beauty from within – Qualitative & Quantitative Market Research“ (2011)