

NUTRICOLIN

THE INGREDIENT THAT IS A TRUE ARTIST
IT ENHANCES THE MOST BEAUTIFUL MASTERPIECE:
THE WOMAN



HAIR

SKIN

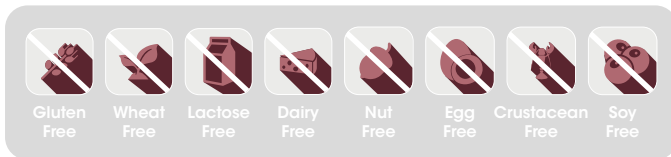
NAILS

NUTRICOLIN®

IT IS A SOURCE OF SILICON, HEALTH, BEAUTY FOR THE SKIN,
HAIR, NAILS, AND EVERYTHING ELSE.

NUTRICOLIN® is Galena's exclusive scientifically proven smart choline-stabilized silicon that brings together all the benefits of beauty proteins.

NUTRICOLIN® is essential to maintain skin elasticity and firmness, and also strong and healthy hair and nails, as it stimulates the beauty proteins: collagen, elastin and keratin. Despite all the advantages, it wouldn't be as powerful without the choline stabilization, which is the best option in silicon absorption for excellent results aimed at quality of life and happiness.



WHAT NUTRICOLIN® CAN DO FOR US?



Galena advises!
Every formula manipulated
for people aged over 35 must
start with Nutricolin®

- It contributes to skin elasticity, flexibility, and strength
- High dermal hydration
- Thicker, stronger, more hydrated and more restructured hair
- Uniform nails with less breakage
- Osteoporosis Prevention
- Supporting Alzheimer's Care

NUTRICOLIN®

AND IT'S UNQUESTIONABLE BENEFITS

Skin

- It helps to hydrate the skin even more;
- Promotes youthful and healthy skin;
- Helps to decrease wrinkles and fine lines.

Aging causes structural changes in the dermis, with wrinkles and sagging as the most evident marks. And NUTRICOLIN® also plays an essential role as silicon is critical for the structural formation of the dermis, through the synthesis of collagen, elastin and glycosaminoglycans.



Intracellular

1. Input of protein, lysine and others.
2. Formation of mRNA for alpha-1 and alpha-2 chains.
3. Synthesis of alpha chains with propeptides on the ribosome.

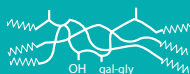


4. Hydroxylation of proline and lysine (vit C cofactor).



5. Hydroxylysine glycosylation (Mn cofact).

6. Formation of the procollagen triple helix (disulfide bridges).



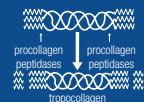
7. Packaging of procollagen for exocytosis.



8. Exocytosis.

Extracellular

9. Cleavage and tropocollagen.



10. Molecular alignment and polymerization to form collagen triple helix, by intra- and inter-helix cross-linking; tensile strength.

Hair

- It helps to fortify, hydrate and restructure the hair;
 - Helps to reduce breakage;
- Promotes resistance, elasticity and shine.

Recent studies have shown that silicon contributes to less hair loss and more shine, since silicon increases the synthesis and compaction of keratin.

Nails

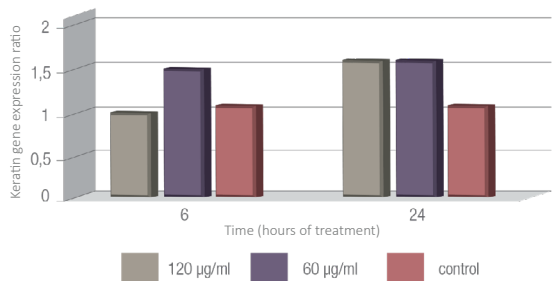
- Helps to strengthen nails;
- Helps to reduce breakages;
- It favors the general appearance improvement (clarity and uniformity).

Soft and brittle nails may indicate a silicon deficiency. In this way, NUTRICOLIN® also helps to increase protection against nail infections, by favoring keratin synthesis and compaction.

NUTRICOLIN®

IN THE KERATIN EXPRESSION!

Study carried out with human keratinocytes in two concentrations of Nutricolin® to measure the keratin gene expression. A concentration of 120 µg/mL represents 600 mg of Nutricolin® and 60 µg/mL represents 300mg of Nutricolin®.



Analysis performed by Instituto Kurz Italia Srl/Italy

Results show that Nutricolin® promotes stimulation of the gene that expresses keratin in dosages from 300mg to 600mg. Therefore, benefits for the hair and nails can be noticed.

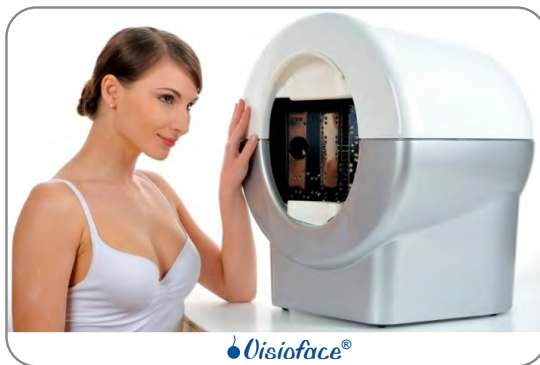
NEW SCIENTIFIC STUDIES ON NUTRICOLIN

Skin

The analysis of the scientific literature on the use of supplements containing silicon shows great therapeutic potential of this element, acting in different conditions of human health and esthetic properties. Among the many chemical forms available, the studies analysis allows us to conclude that orthosilicic acid is the form with the highest bioavailability, and the absorption of the other forms are inversely proportional to the degree of polymerization⁽¹⁾.

A study carried out by the University of São Paulo (USP – Ribeirão Preto) analyzed the effects of Nutricolin® through a clinical trial carried out by skin image analysis. The randomized, placebo-controlled clinical efficacy trial lasted 3 months and involved 60 volunteers, who were divided into two groups (treatment and placebo). The daily dose of Nutricolin® used for the evaluation was 400mg⁽²⁾.

During the 3 months of treatment, analyzes were performed before (baseline – T0) and after 30, 60, 90 days of treatment. The structural characteristics of the dermis were evaluated using high-resolution images (Visioface®) and ultrasound equipment (Dermascan®)⁽²⁾.



Visioface® is a widely used device in cosmetic and dermatological research. From this device, high resolution image scans of the face are made and these are analyzed using a software, which can check for wrinkles, spots and pores on the skin surface, through the delimitation of specific areas and 3D rotation of the chosen area (3D analysis of the skin roughness).

Dermascan® is a high-frequency ultrasound capable of analyzing the echogenicity of dermal tissue (a tissue's own ability to reflect ultrasonic waves and produce echo). The device provides images of dermal structure and absolute values (pixels) that are used to calculate echogenicity. So hypoechoic structures generate dark images (low density tissue) and hyperechoic structures generate clear images (high density tissue).



According to the results obtained, an increase in the echogenicity of the dermis after 90 days of treatment was observed for the group that ingested Nutricolin®. Such result was not observed in the placebo group, therefore showing that the use of Nutricolin® promoted an increase in dermal density⁽²⁾.

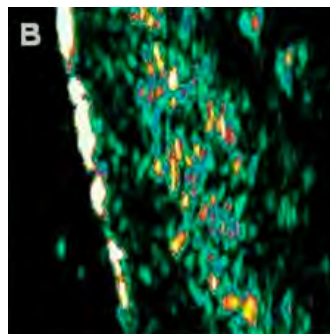
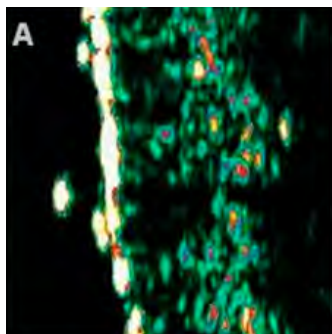
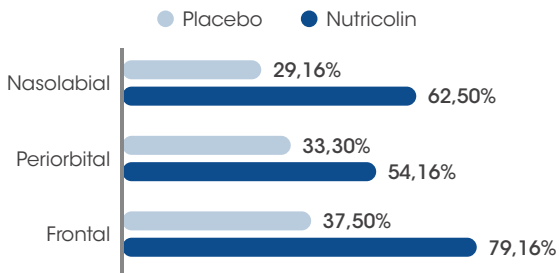
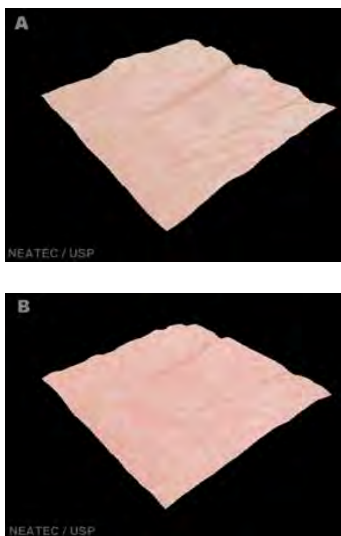


Image showing the difference in echogenicity of the dermis of a volunteer in the Treatment group, before (A) and after 90 days of treatment (B) with Nutricolin®.

Relative frequency of volunteers who had increased echogenicity after 90 days of treatment with Nutricolin®.



- ▶ High-resolution images of the skin showed an improvement in the skin surface and a visible reduction in wrinkles⁽²⁾.



- ▶ High resolution images of the skin of the frontal region of the face before baseline treatment (A) and after 90 days of treatment (B) with Nutricolin[®].

▶ Perception Assessment



Percentage of treatment group volunteers who noticed improvement in terms of skin hydration and reduction of wrinkles after 90 days of treatment with Nutricolin[®].

References:

1. ARAÚJO, L. A.; ADDOR, F.; MAIA CAMPOS, P. M. B. G. Aplicação do silício para os cuidados da pele e cabelos: Uma abordagem sobre as formas disponíveis e eficácia. *Brazilian Annals of Dermatology (Print)*, 2016.
2. FAVARETTO, G.; MAIA CAMPOS, P. M. B. G. Eficácia Clínica por Análise de imagem da pele de Nutricosmético à base de silício. *Cosmetics & Toiletries Brasil*, Vol. 26, May-Jun 2016.

THE SCIENCE OF NUTRICOLIN

HEALTH AND BEAUTY

Silicon is one of the twelve main elements in the composition of living organisms, in addition to being present in certain foods. However, with the rush of everyday life, it is very difficult to extract the necessary amount of silicon for the optimal functioning of the body from food. However, NUTRICOLIN® helps in the replacement of this element, in the maintenance of the body's health and in the development of well-being, taking an essential role in people's lives.



Silicon (Si), a name derived from the Latin Silex or Silicis, which means "stone" or "hard stone", is the second most abundant element on earth, after oxygen.

**THERE IS NO SECRET TO MAINTAIN
GOOD HEALTH. THERE IS NUTRICOLIN®**

3rd most abundant element in the human body (about 1g) participating in bone development and mineralization, in addition to collagen formation.

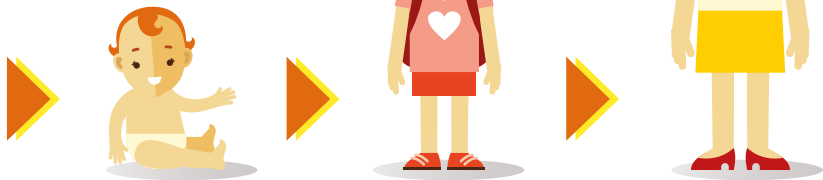
NUTRICOLIN®

TO LIVE WELL THE DIFFERENT STAGES OF LIFE!

As the years go by we end up forgetting that we have our beauty, both inside and outside.

Wrinkles appear, skin texture becomes thinner and more fragile, hair and nails lose strength and our production of collagen, elastin and keratin decreases.

From the age of 35 onwards, there is a reduction in the assimilation of silicon food sources.

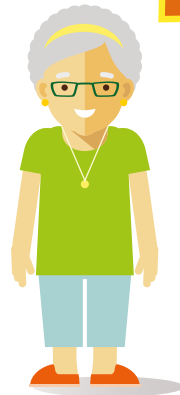


0+

15+

35+

Women are the ones who suffer the most from skin aging, due to the reduction of collagen and elastin. And in menopause, the drop is even greater. Therefore, supplementation with collagen and elastin is essential to delay the signs of time.



50+

NUTRICOLIN®



Nutricolin® - The only Silicon registered by Anvisa

More credibility and security for your products. Incorporate the potent active ingredient Nutricolin into your formulations and guarantee high-tech and quality products.

3 IN 1: HAIR, SKIN, NAILS
Choline-stabilized smart silicon that stimulates beauty proteins: more collagen, astine and keratin. NUTRICOLIN® has its true result in science and is registered with ANVISA.

Do you want to know the Nutricolin®
IC and the referenced studies?

Request on our website.

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 **Galena**® ind