



GENESTRA
BRANDS®

Collagen Liquid Enhanced

Skin health support with Verisol® collagen peptides

- Maintains healthy skin and connective tissue formation
- Verisol® reduces the appearance of wrinkles and promotes visibly smooth skin
- Helps reduce joint pain associated with osteoarthritis
- Includes a blend of clinically researched Verisol® Hydrolyzed Collagen, zinc and biotin
- Delicious natural pomegranate-raspberry flavour

Collagen Liquid Enhanced is a deep-acting formula designed to support healthy-looking skin. Each great-tasting serving offers Verisol® hydrolyzed collagen, a clinically studied and easily absorbed form of collagen.¹⁻⁵ As one of the most important structural components of the skin, collagen provides stability and elasticity to the skin.⁶ However, the production of collagen decreases naturally with age and exposure to environmental factors, such as ultraviolet radiation.^{6,7} As a result of this decrease, fine lines and wrinkles form on the skin and become deeper over time.⁷ While collagen is normally resistant to digestion, Verisol® provides an easily absorbed hydrolyzed form that has been clinically demonstrated to reduce the appearance of wrinkles and promote visibly smooth skin by maintaining connective tissue formation. It offers a combination of amino acids, such as lysine, which has been demonstrated in clinical research to promote collagen production.² By increasing collagen production in joints, hydrolyzed collagen also significantly reduces joint pain associated with osteoarthritis.⁸ To further support the skin, as well as healthy hair and nails, Collagen Liquid Enhanced includes the nutrient cofactors biotin and zinc.



AMOUNT PER SERVING (10 mL*):

Verisol® Hydrolyzed Collagen (bovine skin)	2500 mg
Zinc (zinc bisglycinate)	5 mg
Biotin	250 mcg

Non-Medicinal Ingredients: Purified water, glycerin, xylitol, natural flavours, citric acid, organic stevia leaf extract, potassium sorbate



VERISOL® is protected by US Patent No. US 9,072,724 and is a registered trademark of GELITA AG.

Recommended Dose

Adults: Take 1 serving (10 mL*) 1 to 2 times daily with meals, a few hours before or after taking other medications or natural health products, or as recommended by your healthcare practitioner.

* 10 mL = 2 teaspoons

Product Size
450 mL Liquid

Product Code
10330

NPN 80096227



REFERENCES

1. Proksch, E, Segger, D, Degwert, J, Schunck, M, Zague, V, Oesser, S. Skin Pharmacol Physiol. 2014; 27(1): 47-55.
2. Proksch, E, Schunck, M, Zague, V, Segger, D, Degwert, J, Oesser, S. Skin Pharmacol Physiol. 2014; 27(3): 113-9.
3. Schunck, M, Zague, V, Oesser, S, Proksch E. J Med Food. 2015; 18(12): 1340-8.
4. Knefeli, HC, Durani, B. Nutrafoods. 2017; 16: 9-12.
5. Hexsel, D, Zague, V, Schunck, M, Siega, C, Camozzato, FO, Oesser S. J Cosmet Dermatol. 2017; 16(4): 520-526.
6. Pérez-Sánchez, A, Barrajo-Catalán, E, Herranz-López, M, Micol V. Nutrients. 2018; 10(4). pii: E403.
7. Lupu, MA, Gradisteanu Pircalabioru, G, Chifiriuc, MC, Albuлесcu, R, Tanase, C. Exp Ther Med. 2019; 2019: 1-6.
8. Porfirio, E, Bernardes Fanaro, G. Rev. Bras. Geriatr. Gerontol. 2016; 19(1): 153-164.

GenestraBrands.ca | 1.800.263.5861

Collagen Liquid Enhanced

Scientific Rationale:

The skin is the largest organ in the body and acts as an important barrier against the external environment.¹ It protects the body against harmful factors including pathogens, chemicals, changing temperatures, ultraviolet (UV) radiation and dehydration.¹ However, exposure of the skin to these environmental influences, in addition to the normal ageing process, can result in changes that impact its structure, function and overall appearance.²

While the dermal effects of ageing are rarely visible by the second decade of life, the skin's appearance begins to change as individuals enter their 30s.² The factors that result in skin ageing can be both intrinsic and extrinsic.¹ Intrinsic changes are inevitable and result from genetic, cellular metabolic, hormonal and temporal factors.¹ In contrast, extrinsic changes are avoidable and result from repeated exposure to harmful substances such as poor diet, pollutants, chemicals or UV light (which is associated with premature photo-ageing).¹

Both intrinsic and extrinsic factors lead to metabolic and structural changes in the dermis, the middle layer of the skin.² The dermis is primarily composed of extracellular matrix (ECM) proteins, especially collagen, which is responsible for skin strength and elasticity.¹ While the production of ECM proteins such as collagen and elastin naturally decreases with age, their synthesis is especially reduced after sun exposure, as UV radiation promotes the skin's expression of matrix metalloproteinases (MMP, enzymes that break down ECM proteins).^{1,2} Due to the increase in collagen breakdown and its reduced synthesis in the dermis, fine lines begin to appear on the skin.² As individuals age, these wrinkles deepen and skin eventually becomes looser, dryer and more fragile.²

Emerging research has demonstrated that collagen supplementation can help support healthy-looking skin.² Preclinical studies suggest that collagen acts by promoting the activity of collagen-producing fibroblast cells, increasing the amount and thickness of collagen fibres, and decreasing MMP2 activity.^{3,4} However, before collagen can exert any beneficial effects, it must first cross the intestinal barrier, enter the bloodstream and finally reach the skin.² While intact collagen has a high molecular weight and is normally resistant to digestion, hydrolyzed

collagen (containing a blend of polypeptides) is easily metabolized into peptides with low molecular weight for improved absorption and distribution to the skin.^{2,3}

Verisol® is a proprietary hydrolyzed collagen supplement that has been extensively studied in clinical research.⁵⁻⁸ Randomized, double-blind, placebo-controlled trials have reported that daily intake of 2.5 g of Verisol® for eight weeks significantly improves markers of skin ageing, including reduced appearance of eye wrinkles.^{5,6} Additionally, Verisol® intake has been shown to increase collagen synthesis, suggesting a potential mechanism for its sustained beneficial effects on skin ageing (including improvements four weeks after Verisol® consumption ended).⁶

Besides skin ageing, Verisol® has been found to promote visibly smoother skin.⁷ Healthy adults who consumed 2.5 g of Verisol® for six months reported significantly improved skin waviness (a skin surface profile marker).⁷ These beneficial effects likely resulted from the actions of Verisol® on connective tissue synthesis, as the supplement demonstrated skin compaction and stronger connective tissue.⁷

In addition to its presence in the skin, collagen is also an important component of joint cartilage.⁹ As a result, hydrolyzed collagen has been investigated for its beneficial effects on osteoarthritis (OA).⁹ This degenerative joint disorder is caused by a gradual loss of cartilage, which decreases joint function and increases joint pain.⁹ Supplementation with hydrolyzed collagen provides a combination of amino acids, such as glycine and proline, that accumulate in cartilage and bone.⁹ By stimulating the production of collagen in joint cartilage, these amino acids help reduce the pain associated with OA.⁹

To further promote dermal health, Collagen Liquid Enhanced offers a combination of zinc and biotin. Zinc is found in high levels in the skin, where it is critical for collagen production and transporters related to keratinocyte proliferation and dermal formation.^{10,11} Biotin is a coenzyme required for carboxylation reactions, such as those involved in gluconeogenesis and the production of fatty and amino acids.^{11,12} Adequate intake of both biotin and zinc have been associated with the maintenance of healthy skin, nails and hair.¹²

REFERENCES

1. Pérez-Sánchez, A, Barrajón-Catalán, E, Herranz-López, M, Micol V. *Nutrients*. 2018; 10(4). pii: E403.
2. Lupu, MA, Gradisteanu Pircalabioru, G, Chifiriuc, MC, Albulescu, R, Tanase, C. *Exp Ther Med*. 2019; 2019: 1-6.
3. Diehl, C. *UJDVC*. 2018; 1(68): 99-109.
4. Zague, V, de Freitas, V, da Costa Rosa, M, de Castro, GÁ, Jaeger, RG, Machado-Santelli, GM. *J Med Food*. 2011; 14(6): 618-24.
5. Proksch, E, Segger, D, Degwert, J, Schunck, M, Zague, V, Oesser, S. *Skin Pharmacol Physiol*. 2014; 27(1): 47-55.
6. Proksch, E, Schunck, M, Zague, V, Segger, D, Degwert, J, Oesser, S. *Skin Pharmacol Physiol*. 2014; 27(3): 113-9.
7. Schunck, M, Zague, V, Oesser, S, Proksch E. *J Med Food*. 2015; 18(12): 1340-8.
8. Knefeli, HC, Durani, B. *Nutrafoods*. 2017; 16: 9-12.
9. Porfirio, E, Bernardes Fanaro, G. *Rev. Bras. Geriatr. Gerontol*. 2016; 19(1): 153-164.
10. Chasapis, CT, Loutsidou, AC, Siliopoulou, CA, Stefanidou, ME. *Arch Toxicol*. 2012; 86(4): 521-34.
11. Ogawa, Y, Kinoshita, M, Shimada, S, Kawamura, T. *Nutrients*. 2018; 10(2). pii: E199.
12. A Report of the Standing Committee on the Scientific Evaluation of Dietary Reference Intakes and its Panel on Folate, Other B Vitamins, and Choline and Subcommittee on Upper Reference Levels of Nutrients, Food and Nutrition Board, Institute of Medicine. (1998). *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline*. National Academies Press. Washington, DC: National Academies Press.

