



**Rousselot**  
a VION company

# Peptan<sup>TM</sup>

Cosmetic

New collagen peptides for effective  
skincare and personal care.

**RHC**

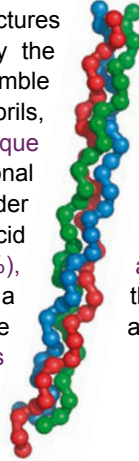
Rousselot Healthy Choice

# Collagen and Skin Health

Collagen is one of the most abundant scleroprotein of the connective tissue occurring as fibres accounting for 70 to 80% of skin dry weight. It is the main structure element of the skin and, therefore, largely responsible for its characteristic properties.

## Collagen, the frame supporting the skin

Collagen fibres are constructed within fibroblasts from protein precursors that are assembled into rigid linear structures arranged in triple helices, which are then secreted by the fibroblasts. After proteolytic cleavage, the fragments assemble into long filaments, which then become grouped into fibrils, and then grouped into bundles. Collagen has a unique amino-acid composition, essential for three-dimensional structure and characteristic physical properties that render the dermis resistant and tonic. The principal amino-acid components of collagen are glycine (35%), proline (7 to 9%), and hydroxyproline (10 to 15%). Hydroxyproline plays a particularly important role in stabilizing the collagen triple helix, protecting against proteolytic digestion. Collagens I and III are responsible for maintaining skin tonicity and solidity.



The deformation of these molecules allows the skin to stretch. These two types of collagen together account for 90% of the collagen present in the dermis (60 to 80% for collagen I and 15 to 20% for collagen III).

This collection of fibres responsible for maintaining the structure and resistance of tissues constitutes a dynamic network anchoring the skin in the deeper layers, thereby creating a support base for the skin.

In addition to collagen's architectural properties, collagen also regulates the activity of fibroblasts, playing a role in their migration, proliferation and differentiation, and in their adhesion to various elements of the extra cellular matrix.

## With time...

Profound changes occur in the skin during aging, with the dermis being the site of the most substantial histological and biological changes. The skin can synthesise collagen fibres, essential protein constituents of the dermis. However, the production of new collagen fibres declines over time. Collagen synthesis by fibroblasts decreases for two reasons: a lower rate of fibroblast renewal with age associated with a decrease in the amount of collagen secreted by these cells.

Collagen is subject to a continuous aging process in the skin, and with age, collagen fibers are more and more cross linked. Collagen becomes tougher and increasingly loses its capacity to bind large quantities of water which is essential for the turgor of the skin.

Consequently the skin looks flabby and older.

## Rousselot, a world leader in manufacturing Collagen peptides

With a worldwide staff of 2,400 people, Rousselot is recognized as a world leader in manufacturing high quality ingredients for the pharmaceutical, nutraceutical, food and cosmetic industries. Although global in location, Rousselot remains a family united by a unique network of manufacturing facilities, sales offices, and technical experts.

For years, Peptan™ Hydrolyzed Collagen has been touted for skin health properties for beauty from within. Recently, studies have shown the advanced benefits of adding Peptan™ to cosmetic formulations, and Rousselot has developed a wide choice of Collagen peptides for your active cosmetic formulations.

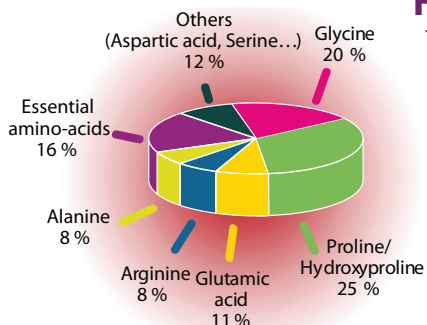
Rousselot's complementary nutritional & topical Peptan™ range offer potential synergies to provide an extra boost to skin beauty and health. Our extensive offer of Peptan™ Beauty products for nutricosmetic applications has proven benefits for moisturizing & anti-aging in two clinical studies.



# Peptan™ Cosmetic

Peptan™ collagen peptides are essential in the proliferation of fibroblast and collagen synthesis in the dermis and moisture retention in the skin.

## What is Peptan™ Cosmetic?



Peptan™ Cosmetic are pure natural type I collagen peptides, preservative-free and easy to formulate in all your cosmetic applications.

The Peptan™ Cosmetic peptide is based on a sequence (GLY-PRO -X or GLY-HYPRO -X) which is naturally present in the dermis and contains 18 different amino acids, including glycine, proline, and hydroxyproline in particular ; these three molecules account for almost 50% of all the amino acids present.

From applications in medicine, it is known that collagen accelerates the healing of skin wounds and the spontaneous reepithelization of the skin.

Used in cosmetic preparations for its water binding potential and anti-aging benefits, collagen helps to promote skin hydration and delays skin aging.

## Peptan™ Cosmetic range

Peptan™ Cosmetic is an exceptionally versatile, natural material offering a unique combination of functional and sensory benefits. Our tailored offering includes Collagen peptides that can help you to create innovative solutions, high-end products adapted to your specific cosmetic needs.

### • Moisture Retention: Peptan™ MR / Peptan™ MR marine

Peptan™ MR is a natural biopolymer with film-forming properties which maintains the moisture balance of the skin and supplies skin with important amino-acids.

### • Skin Regeneration: Peptan™ SR marine

Peptan™ SR marine is an active peptide of marine origin providing the amino acids required for the correct functioning of skin cells. It boosts fibroblast proliferation and favours the synthesis of the major structural collagen molecule of the dermis, thus preserving its structural organisation. It also protects against free radicals, limiting their aging effects.

## Peptan™ characteristics

- Pure type I Collagen peptides
- Produced in our state-of-the-art plant in Angoulême, France
- Manufactured using a gentle enzymatic process to achieve the optimal molecular weight and to ensure the lowest possible odor, color and ash.
- Quality manufactured according to HACCP, ISO and GMP standards

Active Ingredient	Description	Some application ideas	Active components	Use level in %	Benefits		
					100% natural	Transparent aspect	Preservative free
Peptan™ SR marine	3 step skin regeneration collagen peptides	- cosmeceuticals - collagen boosters - anti-aging treatments - Firming products	Fish collagen peptides (2000 Da)	1	✓	✓	✓
Peptan™ MR	Effective moisturizing and film-forming collagen peptides	- moisturising formulations - face and body wash - all hair care products - make-up	Bovine collagen peptides (5000 Da)	0.5 - 5	✓	✓	✓
Peptan™ MR marine	Effective moisturizing and film-forming collagen peptides	- moisturising formulations - face and body wash - all hair care products - make-up	Fish collagen peptides (5000 Da)	0.5 - 5	✓	✓	✓

## Formulating with Peptan™ Cosmetic

- Versatility: pure water soluble spray-dried powder, stable in the pH range of 3.0 to 7.0.
- Thermostability: temperature of up 60°C for a short time does not affect the stability and characteristics of Peptan™ Cosmetic.
- Incorporation: For cold processes, dissolve Peptan™ SR or Peptan™ MR into the aqueous phase. For cold/hot processes, add during the cooling phase below 40°C.

VION

Rousselot is part of VION N.V.,

an international food company

with production and sales facilities

on all continents. With two core activities,

VION Food and VION Ingredients

the company is active

in the field of high quality foodstuffs

and health products for humans and animals.

Rousselot is part of the Ingredients division.

VION has annual sales of EUR 9.6 billion

and provides employment

for 31,000 people worldwide.

VION's head office is in Son,

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