



**Rousselot**  
a VION company

# Peptan<sup>TM</sup>

THE PERFECT PROTEIN  
FOR A HEALTHY LIFESTYLE



**RHC**

Rousselot Healthy Choice

# PEPTAN™ - THE BIOACTIVE PROTEIN

Today consumers are increasingly aware of the benefits of nutritionally enhanced foods and drinks. Peptan™ Hydrolysed Collagen helps provide the functional and nutraceutical activity to create innovative products.

## What is Collagen?

Collagen is a primary connective tissue protein, it represents close to 30 % of animal protein matter. Collagen is a key protein in the body that ensures the cohesion, elasticity and regeneration of skin, cartilage and bone. There are different types of Collagen, depending on the tissues from which it is derived.



## What is Peptan™?

Peptan™ are Type 1 hydrolyzed collagens, the same collagen as that found in human bones and skin. Peptan™ is a high purity natural bioactive product containing more than 97 % protein (on a dry weight basis), supplied in a form that can be easily used and digested by the human body, as has been shown by scientific analysis.

## Origin of Peptan™

Peptan™ products are made in our state-of-the-art plant in Angoulême, France. The Peptan™ range consists of hydrolysates of native collagen from 3 animal origins: fish, pigs and cows. The process is rigorously controlled to obtain a precise degree of hydrolysis, achieve the optimum molecular weight and have the finest organoleptic properties. To ensure that our products are safe and reliable and to achieve full customer satisfaction and confidence, Peptan™ is manufactured under an integrated management system that allows full coordination in accordance with strong hygiene and safety programmes.

## Peptan™ CHARACTERISTICS:

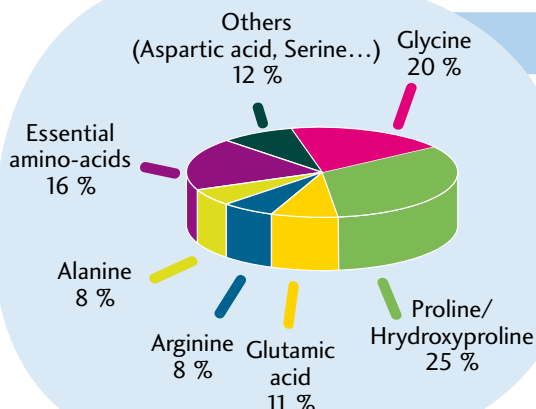
- Manufactured using a gentle enzymatic process
- Easily incorporated into foods and beverages consumers already enjoy
- Non-allergenic
- Free from side-effects
- Highly bioavailable
- Fat and carbohydrate-free
- Natural
- GRAS
- Premium quality manufactured according to HACCP and ISO standards



## A high source of typical amino-acids

Peptan™ contains 20 amino-acids, including 8 out of 9 essential amino-acids.

It is characterized by the predominance of **glycine**, **proline** and **hydroxyproline**, which represent around 50 % of the total amino-acid content. Glycine and proline concentration is 10 to 20 times higher than in other proteins. This very specific composition of amino-acids provides Peptan™ with nutri-functional properties that cannot be found with other protein sources.







## There is always a Peptan™ to suit your application

Peptan™ are available in 3 raw material origins and 2 main standard grades, depending on average molecular weight.



- **Peptan™ P:** Porcine Hydrolyzed Collagen
- **Peptan™ B:** Bovine Hydrolyzed Collagen
- **Peptan™ F:** Fish Hydrolyzed Collagen

Raw Material	Peptan P/B/F			Peptan P/B/F	
Molecular weight (Da)	2000			5000	
Powder specification	FM (fine mesh)	LD (Low density)	HD (High density)	FM (fine mesh)	HD (High density)
Solubility (cold water)	-	very good	good	-	good
Odor	neutral	neutral	neutral	neutral	neutral
Taste	nearly neutral	nearly neutral	nearly neutral	neutral	neutral

## Excellent organoleptic properties Taste and odor-free

Peptan™: the carefully-controlled natural protein that does not distort the taste and odor of the finished product, even when used in high concentrations.

- R&D center expertise to ensure superior sensory properties.
- Each lot has to pass our uncompromising sensory panel to ensure that our customers only get the best.

## Peptan™ IS IDEAL FOR :

- Functional food
- Functional drinks
- Dietary supplements
- Nutritional bars
- Powders
- Cosmetics

There is always a place for Peptan™, it is the ideal bioactive ingredient to include into your innovative product. Rousselot's Technical and Application professionals are ready to work with you to select the right Peptan™ product to meet your requirements.

## Peptan™: The easy-to-use protein.

- easy to handle.
- dust-free powders
- excellent flowing properties
- superior wettability
- rapid dispersion
- instant solubility in cold and warm liquids

## High digestibility

Several studies have demonstrated that Hydrolyzed Collagen is highly digestible. While native collagen is very resistant and regarded as indigestible, denatured collagen can be easily attacked by proteolytic enzymes. More than 90 % of hydrolysates are digested and quickly absorbed after oral ingestion.

(Asghar and Henrickson, 1982 and Rousselot, 2007)

## Recommended daily dosage

It has been proved that 10 grams of Hydrolyzed Collagen per day meets the daily requirements for an adult to enjoy the beneficial effects on joint, bone and skin health.

(Adam, 1995 ; Moskowitz, 2000).

**Labeling of Peptan™ : Hydrolyzed collagen, Collagen hydrolysate, Collagen peptide, Gelatine, Gelatine hydrolysate, Hydrolyzed gelatine**

# PEPTAN™ - HEALTH

## THE PERFECT PROTEIN FOR JOINT AND BONE HEALTH



The world health market is pushed by consumer concern over diseases and pulled by consumer fascination with well-being. The population is getting older, and growing old has its drawbacks: two of the major health concerns are osteoarthritis and osteoporosis, which are leading causes of disability. There is growing scientific evidence that Hydrolyzed collagen can promote joint and bone health.



Bone health problems are on the rise and affect many consumers. The number of consumers suffering with bone health problems, such as osteoporosis and osteopenia, has increased by an annual average of 1 % in Europe and 2.4 % in the US over the 2001-2006 period (*Datamonitor source*). The growth in bone health problems has outstripped population growth across Europe, the US and Asia and demonstrates that an aging population has contributed to this rise. According to the International Osteoporosis Foundation, 30 to 50 % of women and 20 % of men will experience osteoporosis fracture after the age of 50.

**Osteoporosis** is a general disease of the skeleton characterized by a low bone mass. Bone fragility and risk of fracture increase dramatically. **The intake of Hydrolyzed Collagen leads to a significant increase in bone mass and a reduction in the number of fractures for osteoporosis sufferers.** This effect has been demonstrated by scientific research. In 1996, Adams, in a study of humans, measured an increase in bone mass density for a period of 4 to 24 weeks when hydrolyzed collagen was given to patients. In 2001, Mizuno and Kuboki demonstrated that **the endogenous production of collagen, by bone cells is stimulated by hydrolyzed collagen** which leads to some elements on the mechanism.

Arthritis is a chronic and disabling disease, reaching almost epidemic proportions. Sufferers are usually the elderly or athletes. The most common form of arthritis is osteoarthritis, which is a chronic breakdown of the cartilage in the joints leading to immobility and pain. Osteoarthritis is a joint affliction characterized by degenerative lesions in the joint cartilage. According to the World Health Organisation, after the age of 50, 10 % of men and 18 % of women suffer from the disease. **The effect of Hydrolyzed Collagen on the preservation of joint health is more significant for patients suffering more severe symptoms.** It was demonstrated in 2003 by Oesser S. (*Cell Tissue Res, 311: 393-399*) that **the ingestion of Hydrolyzed Collagen may stimulate the endogenous production of collagen, providing the pool of amino-acids and peptides useful for collagen synthesis by the chondrocytes (cartilage cells).**

### Peptan™, THE OPTIMAL NUTRITIONAL SUPPORT FOR:



- Osteoarthritis
- Joint pain
- Joint matrix degeneration
- Stiff joints
- Osteoporosis
- Loss of bone firmness

# PEPTAN™ - NUTRITION

## A HIGH QUALITY PROTEIN IN WEIGHT MANAGEMENT AND SPORTS NUTRITION

Proteins are the nutrients that provide the greatest feeling of satiety, greater than that of carbohydrates and fat for an equivalent calorie intake. Indeed, high protein intake is known to minimize total food consumption. Peptan™ is not only good for weight control, thus reducing the risk of becoming overweight, it also reduces recovery time after sports activities. Due to its favourable properties, Peptan™ reduces recovery time after sports activities and minimizes joint pain after effort.

**Being overweight is defined as having a BMI (body mass index) greater than 25.**

The World Health Organisation (2003) estimates that there are more than 1 billion overweight adults in the world, including at least 300 million who are obese. In Europe, there are approximately 200 million overweight people. In the USA, the estimate is as high as 127 million overweight adults, 60 million of them considered as obese and 9 million severely obese. This poses a major risk concerning the development of chronic diseases such as type 2 diabetes, cardiovascular diseases, high blood pressure...



**A natural product, Peptan™ is an incomparable source of protein**

Incorporated into dietary products, it provides a feeling of fullness that helps to maintain weight and helps to increase the total protein content of finished products. Peptan™ can contribute to a balanced diet and help maintain body weight.

Supplementing Peptan™ Hydrolyzed Collagen in sports nutrition will also provide the metabolism-specific amino-acids that are attracting attention from athletes and sports enthusiasts.



**Peptan™,  
THE OPTIMAL NUTRITIONAL  
SUPPORT FOR:**

- High protein diet products
- Satiety products
- Low glycaemic index food
- Sports food and drinks
- Cereal and Protein bars...



# PEPTAN™ - BEAUTY

## COLLAGENS: ENHANCING BEAUTY FROM WITHIN



What is good on the inside reflects how the outside appears to the world.

It's not just women who have a desire for healthy skin.

Skin is the primary visual indicator of everyday health and also presents external aging symptoms. As the population is getting older, there has been increasing interest in the skin health market.

Products called "Cosmeceuticals", which have more than a superficial effect, are increasing sharply in number.

In addition to conventional skin care with topical applications, the "Beauty from within" trend has become more popular.

### Skin structure

Collagen is an important building block for the skin; it makes up 30 % of the protein the living body and 70 % of the protein that makes up the skin.

Skin tissue is composed of various molecules, some of which are amino acids, and these amino acids are essential for maintaining an even skin structure and thus healthy skin.

The dermis, which provides the foundation for the skin, is closely involved in the skin's elasticity and flexibility. Collagen is the main component of the dermis.

Maintaining the amount of collagen is the key to a beautiful skin. Glycine, proline, alanine and hydroxyproline are the main constituents of collagen; replenishing these constituent amino acids appears to be needed to maintain the amount of collagen at healthy levels.

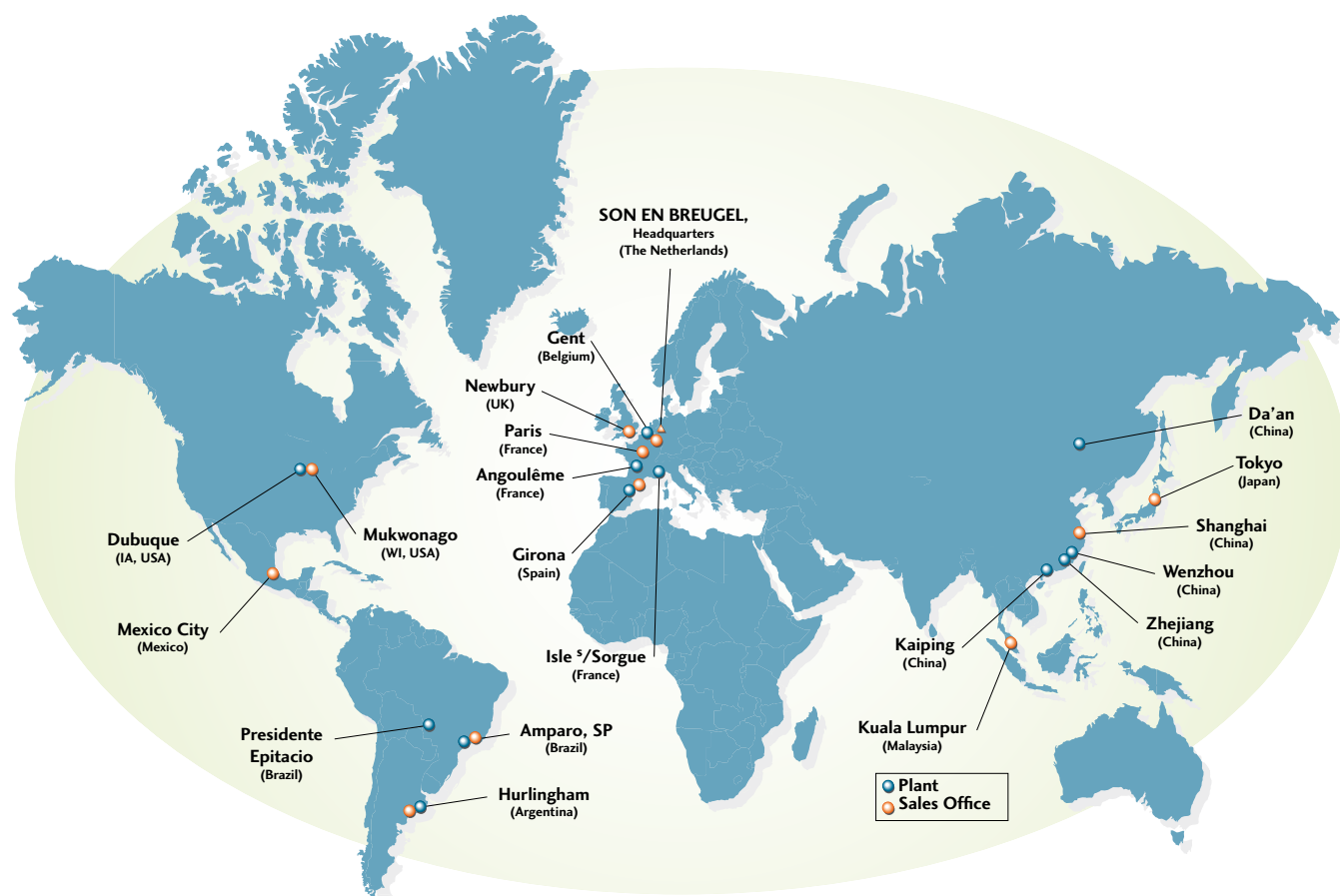
In recent years there has been a growing awareness that collagen is important for the beauty of the skin. Nutricosmetics containing collagen are widely available and are used for skin nutrition to maintain youthful, vibrant skin.

**Peptan™,**

THE OPTIMAL NUTRITIONAL  
SUPPORT TO:

- Promote younger looking skin
- Help maintain skin firmness and elasticity
- Support a healthy skin structure...

With a worldwide staff of 2,400 people dedicated to our customers, Rousselot is recognized as a world leader in Gelatine and Hydrolyzed Collagen production and support. Although global in location, Rousselot remains a family united by a single network of manufacturing facilities, sales offices and technical experts. Diversity of nationalities, strong corporate identity and team spirit are our leading core values.



## Customer-driven solutions

Rousselot combines the strength of a global company with the dedication and commitment of a close reliable partner. The goal of each Rousselot team is to supply the best services and products available, each and every day.

## The right Hydrolyzed Collagen, whatever the application.

Based on its technical know-how, Rousselot's particular strength is to develop products and services in order to find new solutions to suit international, local or individual environments and needs.

## No compromise with Quality

Rousselot's approach is driven by customer focus, in which all our teams play a pro-active part. This ensures that our customers receive the fit-for-use product they expect, at the right time.

Peptan™ Hydrolyzed Collagens are safe and fully traceable. They meet or exceed most international, local and regional quality and environmental standards.

## A company built on a belief: Integrity

At Rousselot, integrity is not just a word but a belief. Integrity, according to Webster's, is "the uncompromising adherence to moral and ethical principles". This is a way of life at Rousselot and the primary reason why we have set the standards for gelatine since 1891. Rousselot is a reliable partner. That is the reason why more global food and pharmaceutical customers put their faith in a partnership with Rousselot than any other gelatine and collagen supplier. Rousselot is recognized as a world leader in the production of safe, high quality collagens and gelatines. Rousselot's commitment to these standards has provided the security, trust and reliability that customers have come to expect.

## No compromise with Quality

Overweight Facts and Protein Quality Excellence are at the heart of Rousselot's approach. Peptan™ Hydrolyzed Collagens comply with most international food and pharmaceutical standards. They are manufactured on ISO 9001-2000 certified sites, in conjunction with strong hygiene and safety programmes, i.e. HACCP and GMP procedures. Aware of diverse needs, Rousselot manufactures Kosher and Halal approved Hydrolyzed Collagens.

VION

Rousselot is part of VION N.V.,

an international food company

with production and sales facilities

on all continents. With three international

divisions, Fresh Meat, Convenience

and 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 35,000 people worldwide.

VION's head office is in Son,

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