

GELITA REVOLUTION: Péptidos de Colágeno para Salud y Nutrición

GELIT4



Agenda

- GELITA Collagen Peptides Introducción
- Peptidos de Colágeno: Anadiendo Valor a sus Productos
- Bioactividad de los Péptidos de Colágeno: Mecanismo de Acción
- Soluciones para Objetivos Específicos: Bioactive Collagen Peptides
- Co-Branding
- Péptidos de Colágeno para Soluciones Diversas



Our locations are part of our philosophy: GELITA – Global Expertise in Collagen Protein

- 142 years old
- Leading expert in Collagen Protein
- 21 production sites worldwide 8 producing Collagen Peptides
- First production 1980
- Complete range of collagen proteins for
- Texturizing
- Protein enrichment
- Physiological & nutritional functionality



GELITA: The Number One in Collagen Clinical Research

BUSINESS UNIT Collagen Peptides

Health & Nutrition

Global Product Management Unit & Accelerator of GELITA's Health & Nutrition Business

Areas of Expertise

- Life Science
- Product, Process, Application & Concept Development
- Regulatory Issues & Patents
- Market & Consumer Research
- B2B & Consumer Solutions

Scientific Network

- CRI, Kiel DE
- SIT Hamburg, DE
- Australian Institute of Sport, AU
- Sport Science Uni. Freiburg, DE
- Sport Science Uni. Bochum, DE
- Tufts Medical Center, Boston, US
- · Penn State University, PA, US
- LGC, Fordham, UK
- Pet Science LMU, Munich, DE

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THE MOST DESIRED AND FAMED FUNCTIONAL INGREDIENT



Beyond stetic! With scientific evidences, collagen is an important ally to maintenance of beauty, bone health, muscles and joints.

of women have interest on new products related to health&wellness and beauty





COLLAGEN IS "TOP OF MIND" AT INGREDIENT LISTS DID YOU KNOW, WHY THIS PROTEIN IS SO IMPORTANT?

Collagen is a natural protein, presents in our body. It is considered the basic structural protein, most important to the connective tissue.

During the aging process, from the age of 30, our body starts to decrease the collagen production, being at 50 years old, the organism produce, in average, only 35% of this protein.

Collagen reduction in our organism results in a lose of muscle mass, decrease the bone density, increase joint fragility, also contributes to increase dehydration and decrease of skin elasticity.

Therefore, to health maintenance, obtainment of collagen proteins in property quantities is essencial in our daily diet.



Researches pointed out that 9 in 10 women have interest in products containing collagen. As much knowledge about the ingredient and benefits better is the customer loyalty.



HOW GELITA ACTS TO PROMOTE THE KNOWLEDGE ABOUT YOUR EXCLUSIVE SOLUTIONS IN COLLAGEN?

We know that Health&Wellness profissionals are the main speakers of collagen to the market. For this reason, our researches are worldwide, present in scientific congresses and seminars of the segment.





Collagen in Humans

Collagen dry mass & type in specific tissues

• Bones: ~ 90% of organic bone matrix; 25% of total mass

• Skin: ~ 75% collagen

Joint cartilage ~ 70% collagen

• Ligaments ~ 70%

• Tendons ~ 85%

Fascia tissue ~ 70%

Muscle tissue ~ 6%

• Other tissues, e.g.:

• Gastrointestinal tract, teeth

• Eyes, ears, nose

· Blood vessel, lung

• Blood-brain barrier



With ~ 30% of the whole body protein content, collagen is the most abundant protein in humans



What are Collagen Peptides?

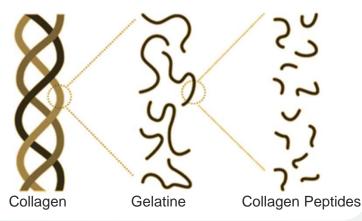
Collagen peptides are food ingredients derived by enzymatic hydrolysis of collagen.

- Clean label, natural
- Non GMO, GRAS, Kosher, Halal (beef)
- Superior sensorial profile
- Clearly water soluble
- High in pH and temperature resistance
- Highly bioavailable source of Amino Acids
- Stimulant of the body's own collagen metabolism





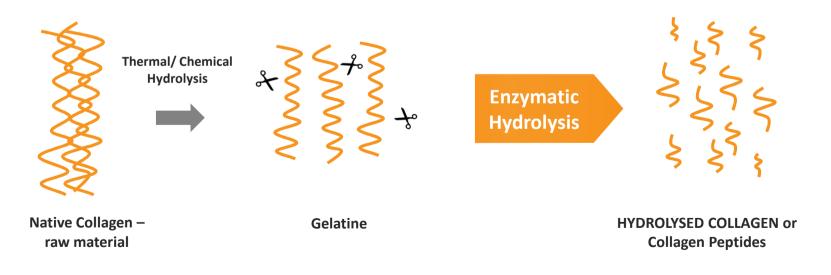






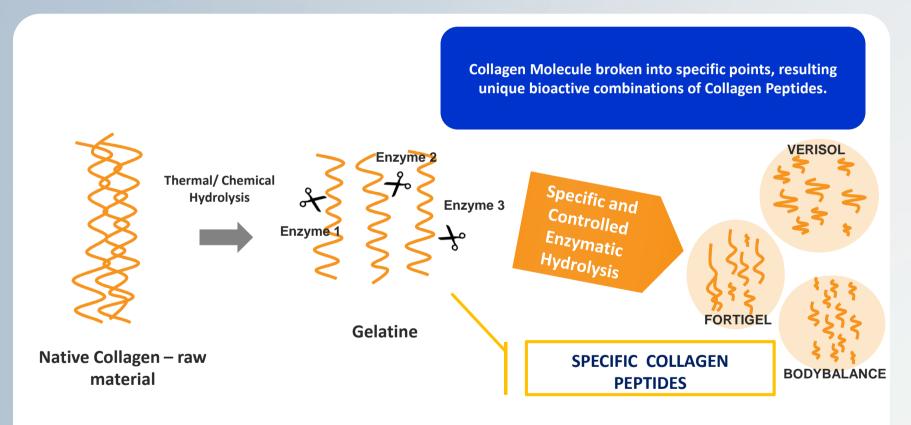
Not all Collagen Peptides are Equal

- There is a big variance in respect to mean molecular weight, molecular weight fractions and terminal amino acids.
- Each marketed product is different, and there may be also a big variance between production batches for one product.
- Collagen Peptides with similar specification sheets don't have a similar physiological functionality





Not all Collagen Peptides are Equal



Collagen Peptides with similar specification sheets don't have a similar physiological functionality (bioactivity)



Not all Collagen Peptides are Bioactive Collagen Peptides®!

- Stimulating effect on in-vitro collagen synthesis widely varies between different types Collagen Peptides
- GELITA assures: Each clinical study is conducted with respective dedicated BCP and dosages.
- Skin

→ Fibroblasts

Joint

- → Chondrocytes
- Sarcopenia
- → Body Composition

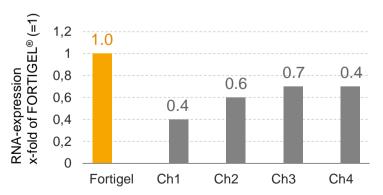
- → VERISOL®
- \rightarrow 2,5g/day
- → FORTIGEL®

VERISOL

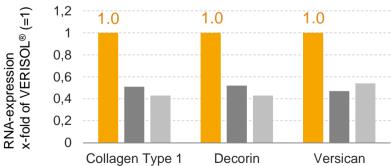
- → 10g/day
- → BODYBALANCE®
- → 15g/day



Collagen peptides with mean MW of 3.0 -5.0 kDa



■ Collagen Peptides 2.1 kDa mean MW Collagen Peptides 2.9 kDa mean MW



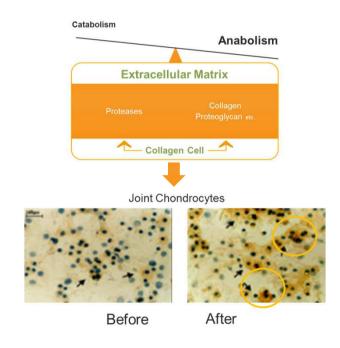
In-vitro data, human dermal fibroblasts

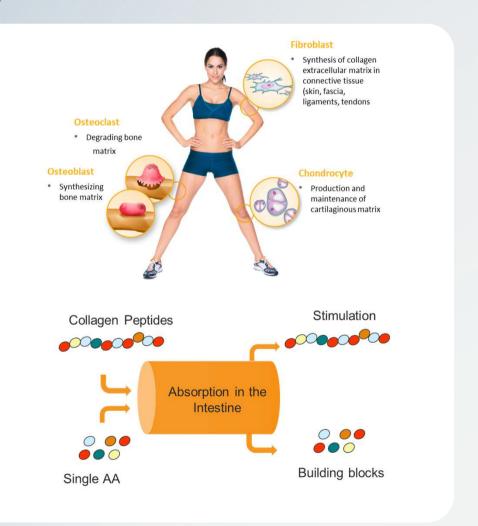
In-vitro data, human chondrocytes



Mode of Action: Stimulation of Human Connective Tissue Cells to Increase Anabolism

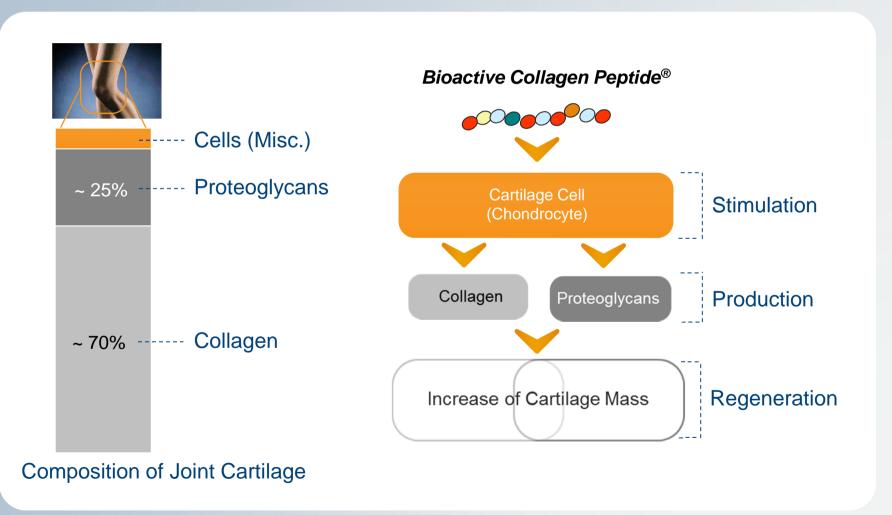
- Human Connective Tissue Cells as Target
- Influence Anabolic-Catabolic Balance to increased anabolism







In-Vivo Stimulation via Bioactive Collagen Peptides®: Mode of Action using the Example of Cartilage





Collagen Peptides Stimulate the Body's Own Collagen Metabolism





Thinking on that, GELITA has developed a portfolio of Bioactive Collagen Peptides, that can be easly applied in a range of food and beverages products, without changes at the production process.

WHAT FUNCTIONALITY WOULD YOU LIKE TO ADD TO YOUR PRODUCT?

2,5
version Within

Specifically optimazed for beauty from within and supported by scientific studies.

PEPTIPLUS
Performance Peptides

Perfect for protein enrichment in food and beverages. Versatile, easy to handle.

Garantee of preference of food industry and health&wellness.

ODY BALANCE Performance Peptides

Population is getting old, and new opportunities are being lauching. BODYBALANCE™ is the newest collagen peptide from GELITA with scientific studies regarding prevention and action against Sarcopenia.



Collagen Peptides Stimulate the Body's Own Collagen Metabolism







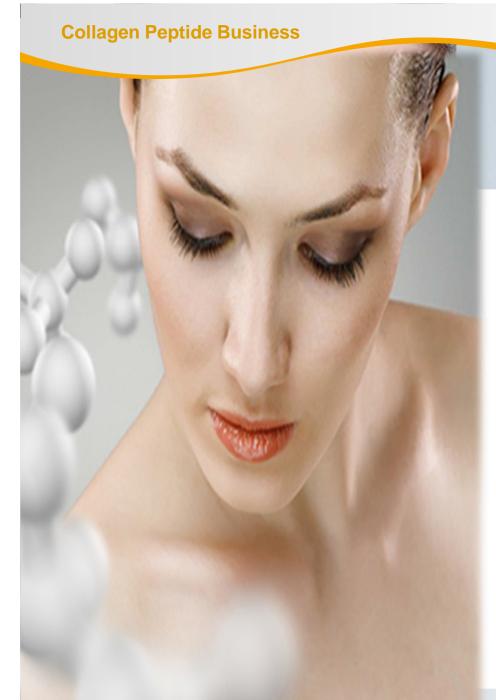
VERISOL®

Beauty from Within



- Unique collagen specific to the skin with scientific evidence of results
- German Technology, exclusive and patented
- Unique combination of Collagen Peptides[®] optimized for skin

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VERISOL®

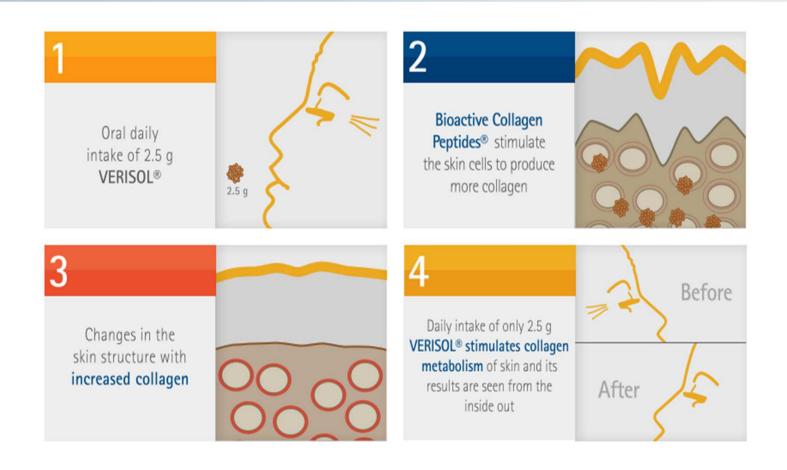
Beauty from Within

- 5 Clinical Studies
- Elasticity 2013
- Wrinkle Reduction 2014
- Celullite 2015
- Growth & Quality of Fingernails –
 2016 (under publication)
- Wound Healing 2017 (under publication)

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VERISOL®: How it Works





VERISOL® Summary



The best choice!

65%

Increased collagen in skin

10%

Increased skin elasticity

32%

Reduced periorbital wrinkles

18%

Increased elastin in skin

- The only oral intake collagen peptide specifically optimized for skin improvement. Scientifically proven.
- Significant reduction of wrinkle depth after four weeks of use
- Delay the signs of skin aging from the inside out
- Non-allergenic
- Safe
- Clean label

Scientifically proven



Your beauty daily dose



VERISOL® ST: Your Tool for High Degree of Fortification

Product range extension of VERISOL®

- ST: SMART TECHNOLOGY
 - New process, patent pending, which changes the physical and process relevant features of VERISOL® without changing the bioactivity!

VERISOL® P HST:

- Bioactivity of VERISOL® P
- + customer process benefits
- + gelling/emulsifying/foaming

Benefit: High Degree of Fortification

 VERISOL density 25% → 2,5 g in ~ 10 g gummies





Beverages













Beverages













Beverages





















Confectioneries













Dairy









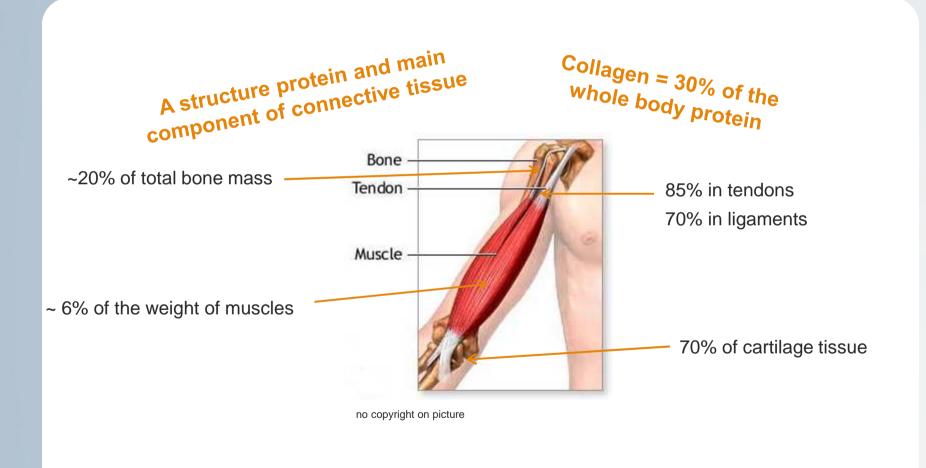


Bioactive Collagen Peptides® stimulate body functions





Collagen: In Close Proximity to Muscle

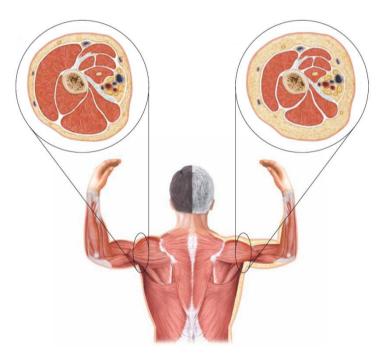




Sarcopenia

Sarcopenia:

Age related decline of muscle mass and reduction in functional muscular performance



- 8% loss of muscle mass per decade age 40-70
- 15% loss of muscle mass per decade after 70
- Loss of muscle mass is leading to decreased mobility and higher risk of falls and frailty.
- Increase of body fat may also be a consequence of muscle loss.

Cruz-Jentoft et al. 'Sarcopenia: European consensus on definition and diagnosis'; Age and Ageing 2010; 39; 412-423 Benton MJ AJN; December 2011; Volume III; Issue 12; p. 38-44



Sarcopenia Causes

Sarcopenia is associated with a deficiency situation

Physical activity

- Lack of physical activity
- Inadequate physical activity

Nutrition

- Lack of proper nutrition
- Inadequate absorption and utilization of nutrients

Aging

Aging combines both elements, due to changes in the body and in lifestyle

- Change in metabolic capabilities
- Cells in the human body become increasingly insensitive to stimulation





BODYBALANCE® - Study Overview

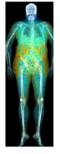
Randomized controlled trials	Training	Target Group	Supplement
1 (2013)	3 -month resistance training	elderly, untrained men	15 gram BODYBALANCE or placebo
2 (2015)*	3 x 60 minutes per week guided training involving all larger muscle groups	middle-aged, untrained men	15 gram BODYBALANCE or placebo, or 15 gram whey protein
3 (2017)*	individual adaptations of the training protocol	young athletes	15 gram BODYBALANCE or placebo

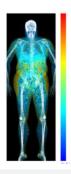
Outcome measures

- Changes in fat free mass (FFM)
- Changes in fat mass (FM)
- Changes in muscle power

DXA measurement (Gold standard)



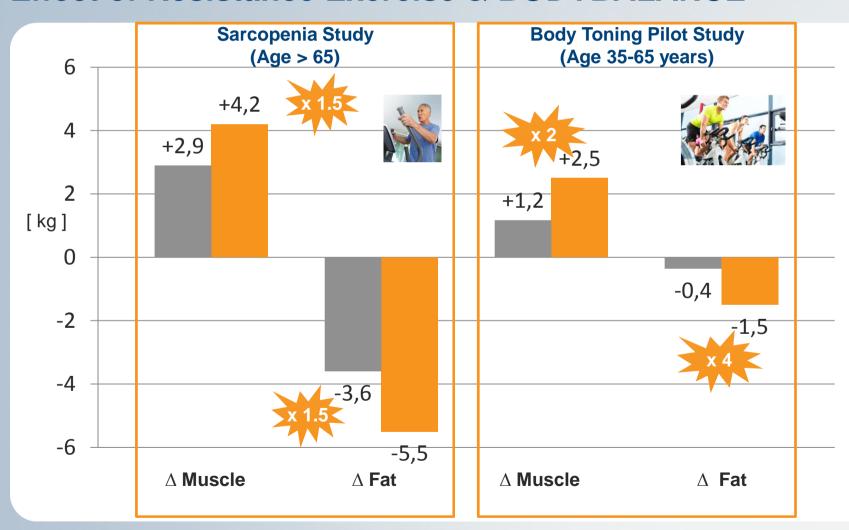




Zdzieblik. et al., (2015) Br J Nutr 114:1237-1245



Effect of Resistance Exercise & BODYBALANCE™





Comparison to Whey – Decrease of fat mass



submitted for publication



Conclusion – BODYBALANCE™ Supports Body Toning

- BODYBALANCE™ helps to slow age related muscle loss in combination with exercise.
- BODYBALANCE™ supports changes in body composition increase of lean body mass and decrease of body fat – in combination with exercise.





Muscle gain: double your training effect



Fat loss: triple your training effect



Target Groups and Applications

Active people, who want to optimize body composition





People fighting age related muscle loss / sarcopenia





- Active Nutrition
- Fitness Nutrition
- Sports Nutrition
- Targeted Nutrition for muscle maintenance



Exemplary BODYBALANCE™







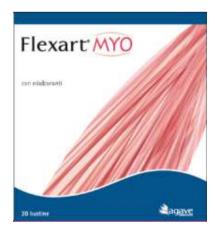




Exemplary BODYBALANCE™











Adding value to your products - GELITA® Collagen Proteins: Trends

AND MORE....



Our press agency <u>constantly</u> contributes with specialized media with our customers, disseminating important information to the public and consumers, that have doubts and difficults to find out reliable products with collagen. For this reason, we had developed an important action with our customers, the...

CO-BRANDING



Using our ingredient trademarks in your end products, our customers help consumers to identify reliable products, quality products with exclusive functionality of GELITA collagen peptides.



- ✓ Country: Brazil
- ✓ Company: Linea Sucralose
- ✓ Product: Shake
- ✓ Presentation: Powder
- ✓ Target Market: Brazil







Eles substituem uma refeição com nutrientes, e trazem benefícias para a saúde. Além disso, também são uma apção refrescente









✓ Country: Brazil

✓ Company: Verde Campo e Boa Forma

✓ Product: Greek with Collagen

✓ Presentation: liquid 90g

✓ Target Market: Brazil









Por que consumir? Perguntas frequentes Onde Encontrar Conheça a Verde Campo





Benefícios Descubra os benefícios do colágeno VERISOL® na sua pele

Veja os benefícios do colágeno na pele



Adding value to your products - GELITA® Collagen Proteins: Trends

DO YOU KNOW THE MOST DESIRED PRODUCTS WITH COLLAGEN WANTED BY CONSUMERS?

FOOD & BEVERAGES

Gelatines, Yoghurts, Cereal bars, Jams, Cereals

Whole breads & pastas, Teas, Juices, Confectioneries, Powder desserts.

SUPPLEMENTS

Capsules, Tablets, Magistral Pharmacies Products.

Protein Bars, Meal Replacer Products, Sport Supplements, Sachets.

COLLAGEN - ALL THE BEST!!!

Natural Ingredient - Clean Label - Non Alergenic - High Digestibility



PROTEIN ENRICHMENT WITH COLLAGEN PROTEINS GELITA





PEPTIPLUS®

- > PEPTIPLUS®: Standard Collagen Peptide, applied in a ruge range of products: edible, protein supplements, ceral/protein bars, meal replacers, etc.
 - High Protein Concentration;
 - Clear Solution;
 - Cold Soluble;
 - Binding Agent;
 - Foam Formation.









pH 3

pH 4

pH 5









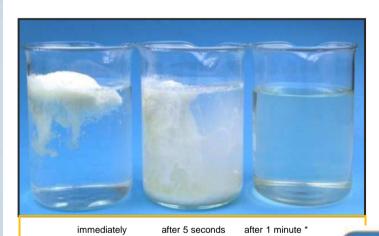






Range of Products: PEPTIPLUS®

► Instant dissolution, more neutral flavor



Concentration: 10 %; Temperature: 25 °C







- Protein Supplements
 - Great perfomance when combined with other sources of protein as Whey Protein (WPC or WPI)
 - Zero allergenic aspects (no lactose, no fat, no gluten)















- Meal Replacers
- Normally used with other source of proteins (casein & WPC),
 - Promotes satiety
 - Promotes foam formation during preparation









• Protein Enrichment





Mocotó Jelly





Governmental Programs





- Protein source
- Read to Drink Beverages containing Collagen Peptides as ingredient.





- Protein source
- Powder beverages









- Protein Source
- Other presentations:
 - Gummies
 - Tablets
 - Spredables (nuts, cream cheese).











Technological Ingredient: Collagen Peptides

Binding Agent

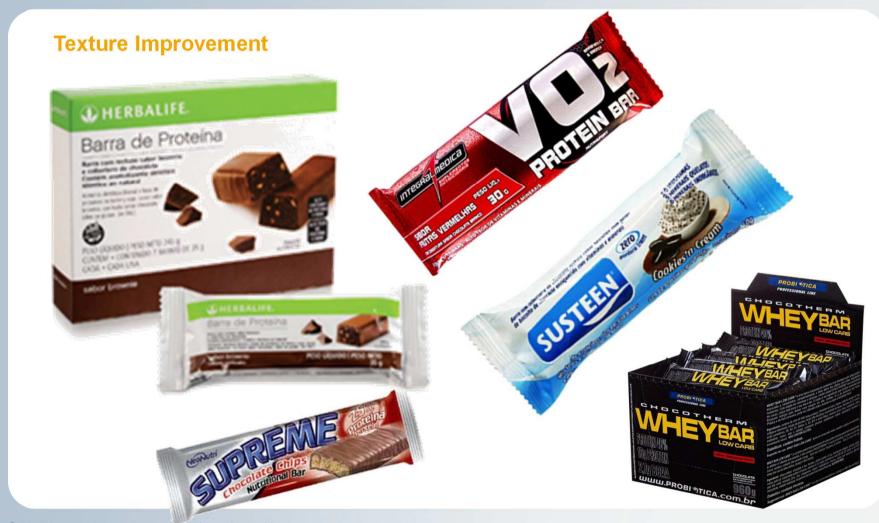








Technological Ingredient: Collagen Peptides





Technological Ingredient: Collagen Peptides

Fat Replacer











Welcome to GELITA How can we help you?

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