



## Bioactive Collagen Peptides<sup>®</sup> HST – The best of two worlds

- Collagen peptides with gelling power
- Realize high protein content
- Fortification and texture all in one
- Highly effective manufacturing process



Benefit from GELITA's Hybrid Smart Technology:

# The first Bioactive Collagen Peptides<sup>®</sup> with gelling power

GELITA re-defines formulation development in confectionery:

$$1 + 1 = 1^*$$

Our Hybrid Smart Technology combines Bioactive Collagen Peptides<sup>®</sup> with gelling power in just one innovative solution!

In functional foods and dietary supplements, it is often a difficult task to process large quantities of protein into the final product. With GELITA<sup>®</sup> HST, GELITA empowers you to master this challenge easily. HST stands for Hybrid Smart Technology and includes a new product portfolio of collagen proteins that facilitate the production of new, innovative final products on existing production lines.

The product range consists of two groups: the ST products offer the physiological functions of collagen peptides, while the HST (Hybrid ST) products have additionally the gelling function of gelatine. Both ST and HST products makes it easier than ever to incorporate high proportions of protein into the product.

## ! High protein, high pleasure – standard production

An excellent example of the added value derived from our combined product is the production of high-protein gummies. By using HST peptides and a recipe adapted to high protein levels, clear fruit gummies with a protein content of 33% can be made on a standard mogul production line. For bioactive collagen peptides such as VERISOL<sup>®</sup>, this would correspond to a daily dose of 2.5g in three fruit gums\*. This is not currently possible with conventional powder products.

For marshmallows we made extraordinary good experiences with a protein content of 30%. For bioactive collagen peptides such as VERISOL<sup>®</sup>, this would correspond to a daily dose of 2.5g in three marshmallows. Another example is the use in hard boiled candies. Here we can achieve up to 88% pure protein!

*\* average weight per piece 2.6g*

## Collagen and BCP<sup>®</sup>: essential for health – and quality of life

Classified as a foodstuff, GELITA collagen peptides and gelatine are free of E-numbers. Our ST products are therefore ideally suited for use in clean label products. In addition, they reduce the complexity of the ingredient list with a unique activity profile that can otherwise only be achieved by combining a wide range of other ingredients.

Gain a lead – with GELITA's market orientation, technology and customer support!

## Tailored solutions for a growing market

Driven by a number of factors, the worldwide markets for collagen peptides and gelatine continue to flourish. Knowing about different markets and habits, traditions and trends, we offer innovative HST solutions based on pork and on beef, also including halal and kosher versions. Gelita HST products are designed to make it easier for manufacturers to take advantage of the continuing trend for protein-rich products and the higher margins in functional confectionery. Like all GELITA ingredients, HST products are also free of E-numbers and allergens. They are therefore ideally suited for use in clean label production.

## Technological benefits

We know and anticipate the challenges of confectionery manufacturers. Due to a higher bulk density our ST/HST powders produce less dust during production, transportation and storage. This makes handling easier and also reduces the time required for cleaning, leading to time and cost savings.

Our HST products also show improved dissolution properties: Due to an adjustable particle size, a higher bulk density and an improved wettability profile, it is now easier than ever to create high-concentration solutions. Because the particles sink to the bottom of the dissolution vessel more quickly, fewer clumps form and, because of a lower air input, less undesired foaming occurs. Our product enables you to develop new products without the need of additional investments.

Finally, using only one product instead of two include the advantage of supply chain optimization (order, transport, store and process just one ingredient).

### Better solubility at high concentrations



### Increased bulk density and better production handling



## First class service

GELITA continuously monitors global markets and consumer trends to help our customers develop innovative approaches to creating new products. From technical support, recipe or concept development and nutritional and regulatory advice, we offer guidance and expertise throughout the entire value chain. Please contact us for a qualified application-specific consultation!

PRODUCT	APPLICATIONS	DOSAGE
PEPTIPLUS® HST B/P	<ul style="list-style-type: none"> <li>• High protein confectionery with high quality</li> <li>• Collagen enrichment</li> <li>• Pure protein products such as candies, protein chips</li> </ul>	
VERISOL® HST B/P	<ul style="list-style-type: none"> <li>• Bioactive protein confectionery</li> <li>• Bioactive collagen enrichment</li> <li>• Beauty from within concepts</li> </ul>	For the daily dose of 2.5 g: 3 gummies* or 3 marshmallows* or 3 candies
FORTIGEL® HST B/P	<ul style="list-style-type: none"> <li>• Bioactive protein confectionery</li> <li>• Bioactive collagen enrichment</li> <li>• Joint health concepts</li> </ul>	For the daily dose of 5 g: 6 gummies* or 6 marshmallows* or 6 candies
FORTIBONE® HST B	<ul style="list-style-type: none"> <li>• Bioactive protein confectionery</li> <li>• Bioactive collagen enrichment</li> <li>• Bone health concepts</li> </ul>	
TENDOFORTE® HST B/P	<ul style="list-style-type: none"> <li>• Bioactive protein confectionery</li> <li>• Bioactive collagen enrichment</li> <li>• Concepts for health of ligaments and tendons</li> </ul>	

B = Bovine; P = Porcine

\* average weight per piece: 2.6g

Functional boost with high protein

## Make high protein confectionery innovations a reality!

GELITA's Bioactive Collagen Peptides® HST can be used for protein enrichment in a variety of innovative products such as fortified gummies, marshmallows, candies and much more.

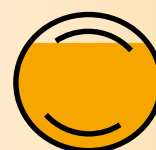
Up to 35% protein



Up to 35% protein



Up to 88% protein



### GELITA® HST promotes

- clean label (no E-numbers)
- highly digestible food
- non-allergenic food
- innovative edge on the market
- GMO free
- Halal certificate
- Patent pending (WO2015193300A1)



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GELITA AG · Uferstr. 7 · 69412 Eberbach · Germany · www.gelita.com

**GELITA**  
Improving Quality of Life