

Technical Data Sheet

ADVANCED COLLAGEN PEPTIDES PORTFOLIO

Overview: This technical data sheet provides standardized specifications for our premium range of collagen ingredients, designed for integration into dietary supplements, functional foods, cosmetics, and specialized nutritional formulas. All products are non-gelling, highly soluble, and optimally hydrolyzed for maximum bioavailability.

1. HYDROLYZED BOVINE COLLAGEN PEPTIDES

Derived from premium, strictly controlled bovine hide (Type I & III). Our proprietary enzymatic hydrolysis process yields a neutral-tasting, highly pure powder with an optimized molecular weight profile. Recommended for functional beverages, nutrition bars, and general wellness supplements.

Physicochemical Properties

Appearance	White to light yellow powder
Protein Content (N x 5.55)	≥ 90% (Dry basis)
Moisture	≤ 8.0%
Ash Content	≤ 2.0%
pH (10% aqueous solution)	5.0 – 7.0

Microbiological Standards

Total Plate Count	≤ 1,000 cfu/g
Yeast & Molds	≤ 50 cfu/g
Escherichia coli	Negative / 10g
Salmonella spp.	Negative / 25g

Key Characteristics: Exceptional cold-water solubility. Viscosity remains low even at high concentrations (up to 30% solids). The amino acid profile is characterized by high concentrations of Glycine, Proline, and Hydroxyproline, which together constitute approximately 50% of the total amino acid content.

2. MARINE COLLAGEN PEPTIDES

Sourced exclusively from wild-caught ocean fish (primarily scales and skin). This Type I collagen undergoes stringent deodorization and hydrolysis to achieve a remarkably low molecular weight. It is ideal for premium nutricosmetics, beauty-from-within applications, and formulations requiring rapid absorption and strict pescatarian compliance.

Physicochemical Properties

Average Molecular Weight	≤ 2,000 Daltons
Protein Content (N x 5.55)	≥ 93% (Dry basis)
Odor / Taste	Neutral, typical
Heavy Metals (Total)	≤ 10 ppm
Lead (Pb)	≤ 0.5 ppm

Solubility & Clarity

Cold Water Solubility	Excellent
Clarity (10% solution)	Clear, highly transparent
Turbidity	≤ 10 NTU
Color (APHA)	≤ 30

3. BIOACTIVE COLLAGEN PEPTIDES®

Our bioactive lines utilize specific enzyme combinations to cleave collagen at targeted peptide bonds. This results in peptide chains structurally optimized to bind to fibroblast and chondrocyte receptors, actively stimulating the endogenous synthesis of extracellular matrix proteins in skin, joints, and bone.

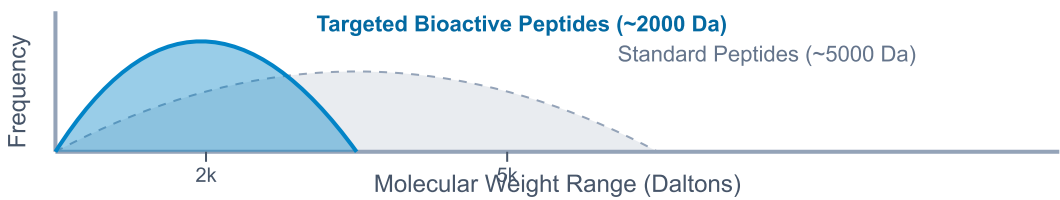


Fig 1: Mass spectrometry distribution demonstrating the concentrated narrow molecular weight profile of Bioactive Peptides versus standard hydrolysates.

4. CUSTOM B2B FORMULATIONS

We provide comprehensive end-to-end contract manufacturing and formulation services. Recognizing that raw collagen is often only the base of a functional product, our R&D team customizes blends to meet specific sensory, nutritional, and shelf-life requirements for global B2B partners.

- **Synergistic Fortification:** Pre-blending collagen with Vitamin C, Hyaluronic Acid, Biotin, Resveratrol, and botanical extracts.
- **Agglomeration & Instantization:** Modifying particle size and utilizing sunflower lecithin to create instant-dissolve beverage powders.
- **Flavoring & Masking:** Applying proprietary flavor-masking technology to ensure clean taste profiles in neutral or flavored applications.
- **Custom Packaging formats:** Delivered in 15kg/20kg bulk poly-lined craft bags, super sacks, or retail-ready packaged formats.

QUALITY ASSURANCE, STORAGE & HANDLING

Our manufacturing facilities operate under strict compliance with global food safety standards. Every batch is supplied with a comprehensive Certificate of Analysis (CoA) detailing physicochemical properties, microbiological safety, and heavy metal testing executed by accredited third-party laboratories.

ISO 9001 & FSSC 22000

GMP Certified Facility

Halal & Kosher Available

Storage Conditions & Shelf Life:

Store in a cool, dry, and well-ventilated area away from direct sunlight, strong odors, and moisture. Optimal storage temperature is below 25°C (77°F) with relative humidity below 65%. Under these conditions, the product maintains a stable shelf life of **36 months** from the date of manufacture.

Regulatory Compliance: Raw materials are fully traceable and conform to relevant FDA regulations, EU hygiene directives (Regulation EC No 853/2004), and global veterinary standards.