



matripure<sup>®</sup>

*Cosmetics-grade Soluble Elastin*

*Quality. Made in Germany.*



# matrihealth

*Expertise in Elastin*

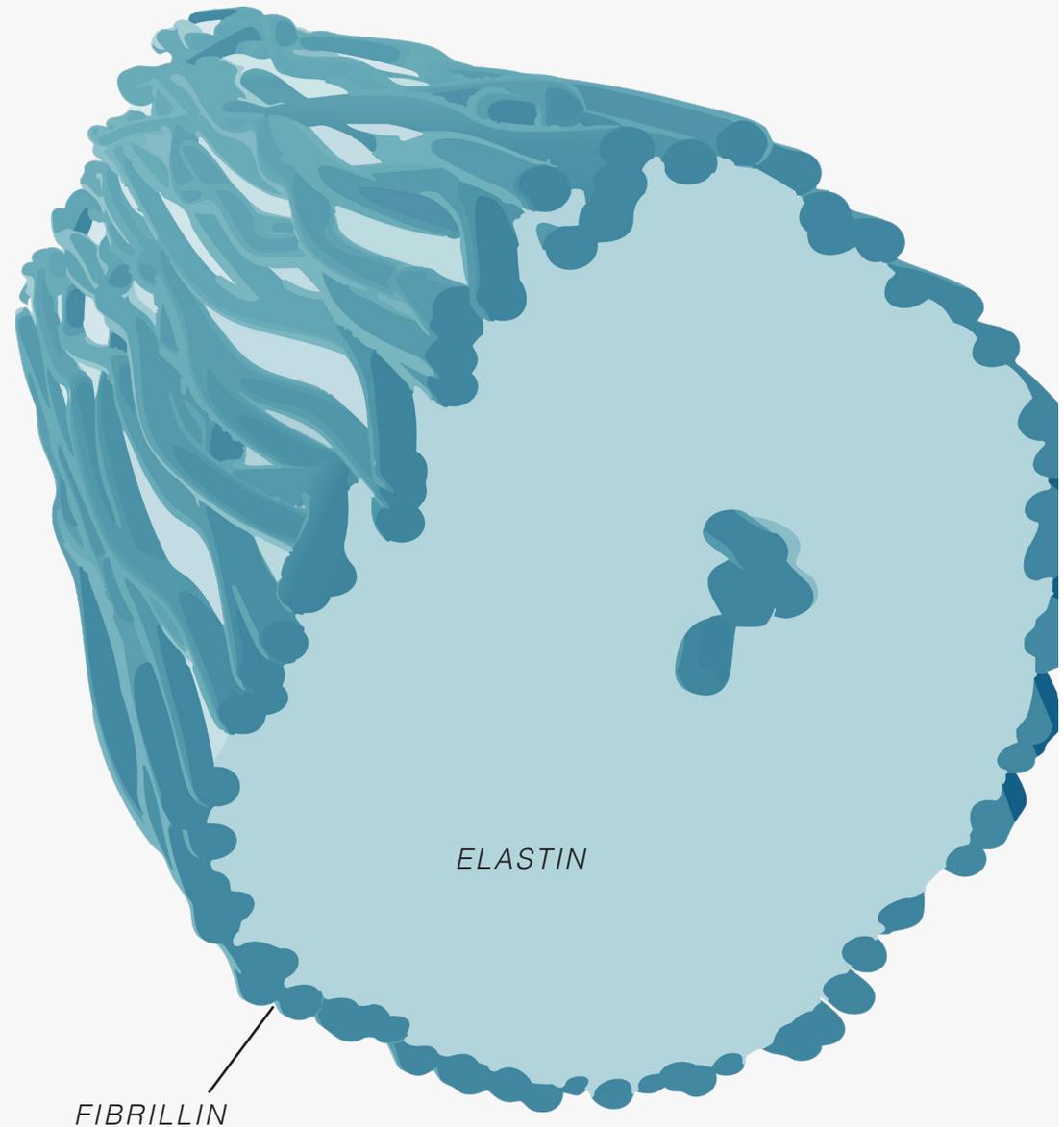
*matrihealth GmbH specializes in the industrial isolation and processing of elastin, offering a comprehensive portfolio of high-quality elastin raw materials for cosmetic and personal care applications. With over 20 years of expertise in elastin research, the development of isolation strategies, and scalable processing methods, the matrihealth team sets industry standards in quality assurance, technological innovation, and application-driven product development. All of matrihealth's production takes place in Germany, covering the entire elastin production chain — from the careful selection of raw materials to the packaging of premium elastin ingredients. This ensures the consistent high quality and safety of our products, which are regularly tested and confirmed by independent laboratories.*

## Elastic Fibers

### *The Foundation of Skin Elasticity*

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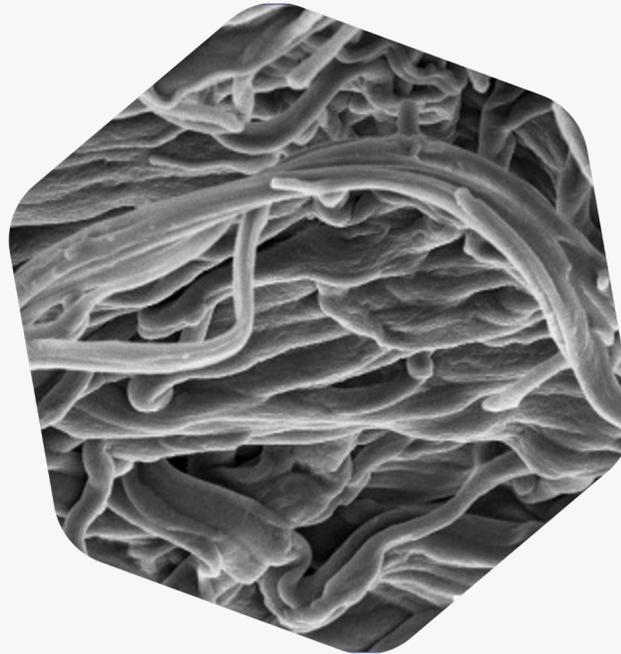
*Elastic fibers are key components of connective tissue, providing strength, flexibility, and resilience to organs and tissues. They are primarily composed of elastin and fibrillin, forming a network that allows tissues to stretch and return to their original shape. In the skin, elastic fibers maintain firmness and elasticity, playing a crucial role in preventing sagging and wrinkle formation.*



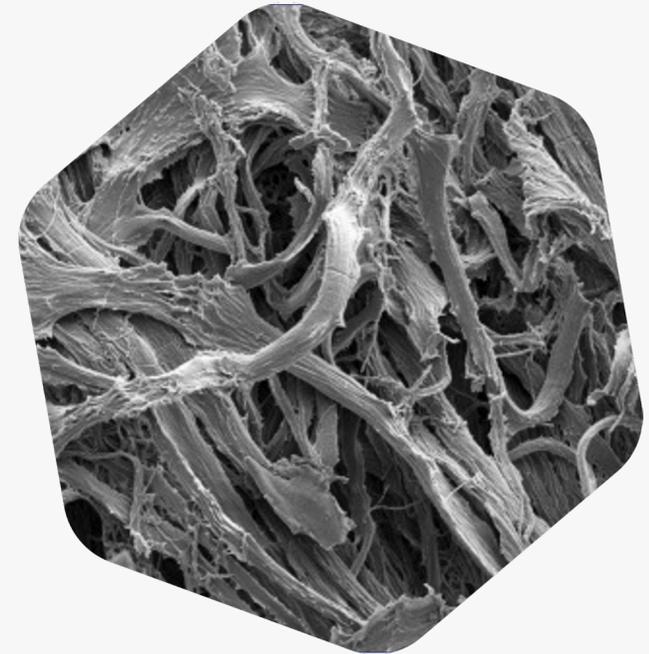
SCHMELZER ET AL., IUBMB LIFE 2019, 1-13

# Elastin

## *Degradation Over Time*



INTACT SKIN ELASTIN



DEGENERATED SKIN ELASTIN

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*Elastin is essential for maintaining skin elasticity and firmness, but it degrades over time due to natural aging and external factors. UV radiation, and oxidative stress accelerate this process, leading to a gradual loss of skin elasticity. Since the body cannot regenerate elastin, its deterioration contributes to wrinkles, sagging, and reduced skin resilience.*

MORA HUERTAS ET AL., 2016, BIOCHIMIE 128-129, 163-173

**matripure®**

*Cosmetics-grade Soluble Elastin*

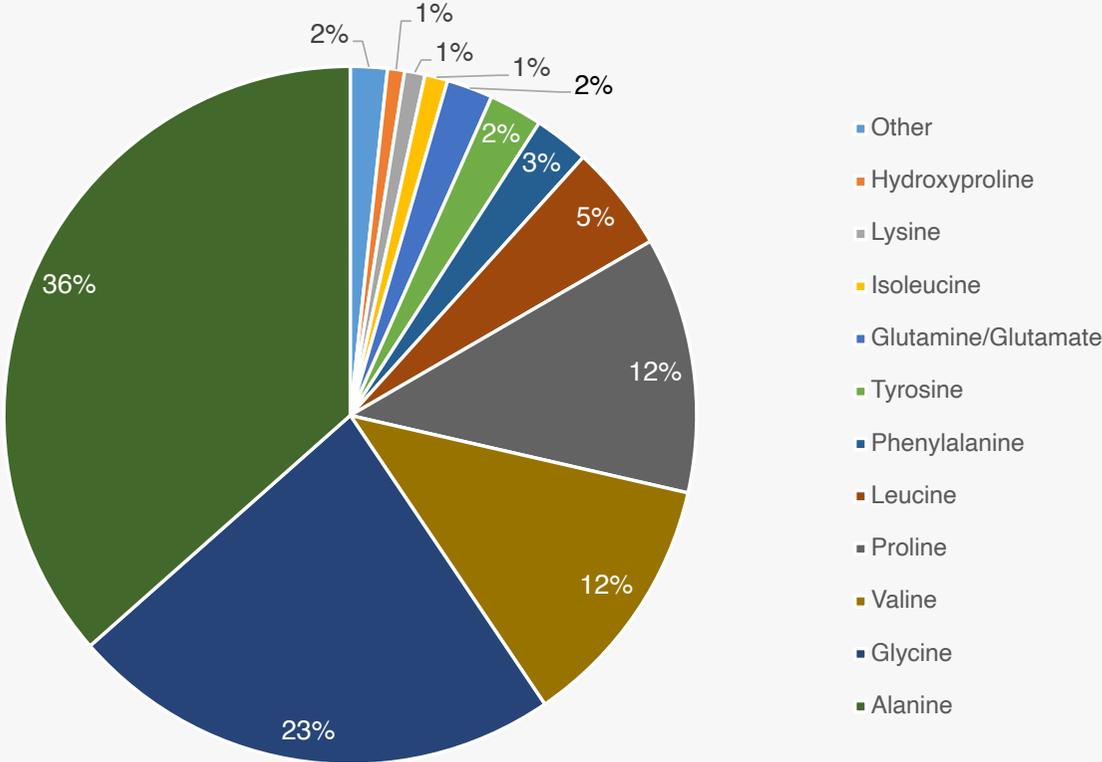
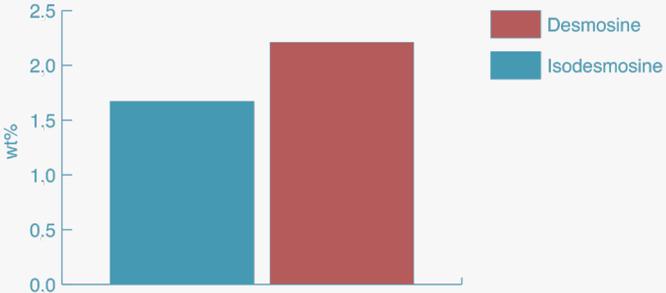


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*matripure® is a high-quality, water-soluble elastin hydrolysate designed for cosmetic applications. Produced in Germany, it is easy to formulate and optimized for effective action on the skin. matripure® helps reduce skin roughness and smooth out irregularities, contributing to a more even and refined skin texture. Its excellent water-binding capacity further supports skin hydration and suppleness.*

# matripure®

## Amino Acid Profile



*matripure® provides a unique amino acid profile, rich in alanine, glycine, proline, and hydroxyproline, key components of elastin. It also contains more than 1% isodesmosine and over 2% desmosine, distinctive cross-linking amino acids that contribute to elastin's structural integrity. Optimized for cosmetic formulations, matripure® supports skin-smoothing effects and helps improve skin texture.*

## Product Specifications

### Physical and Chemical Properties

Appearance	Yellow to orange, odorless powder
Water content	≤ 10 w%
Active water ( $a_w$ )*	< 0.6
Conductivity	< 1 mS/cm
Molecular weight ( $M_w$ )*	10-30 kDa
pH	6 - 8
Clarity of solution	> 80 % (indicative value)

### Heavy Metals

Arsenic (As)	≤ 1 mg/kg (ppm)
Antimony (Sb)	≤ 1 mg/kg (ppm)
Cadmium (Cd)	≤ 1 mg/kg (ppm)
Lead (Pb)	≤ 1 mg/kg (ppm)
Mercury (Hg)	≤ 1 mg/kg (ppm)

Quality assurance is a top priority at matrihealth. Compliance with these product specifications is monitored through batch release testing or periodic validation (\*).

### Identity

Protein fraction*	≥ 90 %
Desmosine*	≥ 0.5 w%
Isodesmosine*	≥ 0.5 w%
Elastin content*	≥ 90 % in protein fraction

### Microbiology

Total Aerobic Mesophilic Microorganisms (Bacteria, Yeast, Molds)	≤ 100 CFU/g
Total Aerobic Mesophilic Bacteria	≤ 100 CFU/g
Yeast and Mold	≤ 100 CFU/g
<i>Pseudomonas aeruginosa</i>	Abscence
<i>Staphylococcus aureus</i>	Abscence
<i>Escherichia coli</i>	Abscence
<i>Candida albicans</i>	Abscence
<i>Aspergillus niger</i>	Abscence
<i>Salmonella</i>	Abscence

**matripure®**

## *Benefits in Cosmetic Formulations*

### **Optimized for effective skin care**

*Medium degree of hydrolysis for targeted effects*

### **High water-binding capacity**

*Supports skin hydration*

### **Quality and safety**

*Meets strict microbiological standards and heavy metal limits*

### **Versatility**

*Easy to incorporate into various skincare formulations*

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*matripure® is produced in Germany under strict quality standards. Its excellent water-binding capacity and easy formulation provide outstanding versatility to cosmetics manufacturers.*



# Hydrolyzed Elastin

## *Innovative Active Ingredient*

**Maintain a youthful skin.** *Hydrolyzed elastin enhances skin elasticity and firmness, reducing the appearance of fine lines and wrinkles. Its bioactive peptides promote skin rejuvenation by stimulating the natural production of skin fibroblasts (1-3).*

**Moisturize and nurture.** *With its exceptional hydrating properties, hydrolyzed elastin offers deep moisture retention, improving skin softness and smoothness. It forms a protective barrier that locks in hydration, making it ideal for dry and sensitive skin types (1-4).*

**Haircare.** *Hydrolyzed elastin nourishes the scalp and strengthens hair strands, promoting healthier, shinier hair. It helps prevent breakage and restores elasticity, making it perfect for damaged or chemically treated hair (4-5).*



#### References:

- 1) Zhang, L.; Falla, T. J. *Cosmeceuticals and Peptides*. *Clin. Dermatol.* 2009, 27 (5), 485–494.
- 2) Badenhorst, T.; Svirskis, D.; Wu, Z. *Pharmaceutical Strategies to Topical Dermal Delivery of Peptide/Proteins for Cosmetic and Clinical Therapeutic Applications*. 2014, 2, 1–10.
- 3) Liu, M.; Chen, S.; Zhang, Z.; Li, H.; Sun, G.; Yin, N.; Wen, J. *Anti-Ageing Peptides and Proteins for Topical Applications: A Review*. *Pharm. Dev. Technol.* 2022, 27 (1), 108–125.
- 4) *CosIng Database, Ingredient: HYDROLYZED ELASTIN*. <https://ec.europa.eu/growth/tools-databases/cosing/details/76590>; accessed 2024-11-25
- 5) Scibisz, M.; Arct, J.; Pytkowska, K. *Hydrolysed Proteins in Cosmetic Production, Part II*. *SOFW J. Pol. Ed.* 2008, 1, 12–16.



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