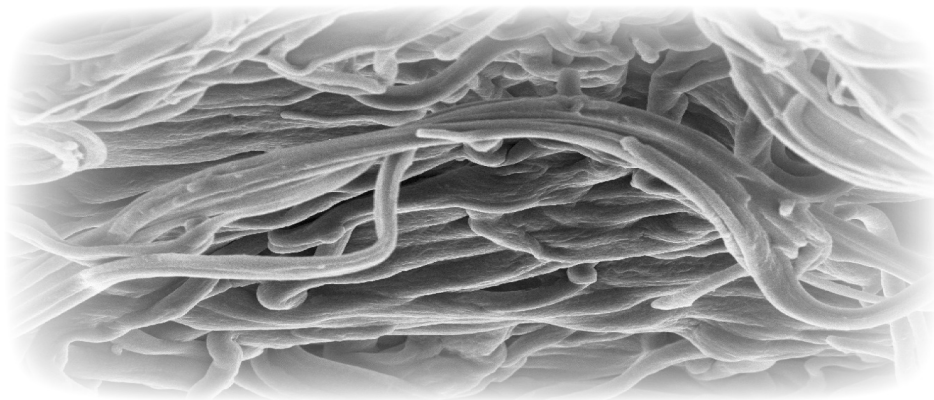


# AC Soluble Elastin PF



Interwoven Benefit  
**Synergistically complements**  
 Collagen **Anti-Aging**  
 natural stretching  
 antioxidant activity for free  
 radical scavenging

## BACKGROUND

Collagen within cosmetics has been a topic of daily conversation since its introduction; it has not been until recently people have come to realize that elastin is equally important. Collagen and elastin are proteins in the skin that work synergistically to provide interwoven skin support and structure. **AC Soluble Elastin PF** harnesses the natural strengthening power of elastin to promote more youthful looking skin.

## SCIENCE

Collagen aids synergistically in the stretching of elastin by not allowing it to stretch to its breaking point. As often as we hear about collagen, elastin is equally critical in combatting the signs of aging. Structurally, this large fibrous protein is formed through spiral filaments that are often compared to springs. These elastin fibers can stretch upwards of 1.5 times their length and still have the elasticity to snap back to their original conformation.

Elastin is primarily composed of amino acids and is essential for our bodies' framework, allowing tissues to regain their original shape. As the skin stretches and relaxes, these amino acids aid in bringing the skin back to its original shape. This can be attributed to their interlinking chains, comprised of approximately twenty amino acids; this unique interlinking is ultimately responsible for elastin's flexibility. These flexible chains allow for the formation of a flexible film on the surface of the skin and hair that enhances suppleness and helps retain moisture. Increases in flexibility leads to less signs of visual aging, and fewer indicators of damage.

When utilized in hair care, this protective film helps to prevent breakage while maintaining the hairs natural moisture. As we all know, environmental factors, such as sun damage, contribute to the aging process. This environmental stress damages our bodies' elastin fibers and over time, these once healthy fibers degrade into damaged less effective elastin fibers. Further degeneration and separation lead to fragments causing major structural imperfections to our skin, commonly known as wrinkles.

**Code Number:** 20595PF

**INCI Name:** Hydrolyzed Elastin

**INCI Status:** Conforms

**REACH Status:** Complies

**CAS Number:** 91080-18-1

**EINCS Number:** 293-509-4

**Origin:** Animal

**Processing:**

GMO Free

No Ethoxylation

No Irradiation

No Sulphonation

**Additives:**

Preservatives: None

Antioxidants: None

Other additives: None

**Solvents Used:** Water

**Appearance:** Clear to Hazy Liquid

**Soluble/ Miscible:** Water Soluble

100% Biodegradability

**Microbial Count:** < 100 opg,

No Pathogens

**Suggested Use Levels:** 1.0 - 10.0%

**Suggested Applications:**

Anti-Aging, Antioxidant

## Benefits of AC Soluble Elastin PF

- Works for Fine lines and Wrinkles
- Anti-Aging
- Natural Antioxidant

# AC Soluble Elastin PF

## BENEFITS

**AC Soluble Elastin PF** is hydrolyzed to a low molecular weight, allowing for easier compatibility with the skin to enhance moisturization properties. Elastin hydrolysis also leads to anti-irritant properties and increases the overall level of compatibility to a wider pH range, making it ideal for a variety of formulations. Ultimately, our body's elastin production slows and eventually stops in adulthood and elastin fibers are no longer renewed. For these reasons, **AC Soluble Elastin PF** is a natural and critical component for products that intend to smooth, moisturize, and improve overall appearance. Another major benefit is the diminishment in the appearance of fine lines and wrinkles due to strong protective film forming properties.

## EFFICACY DATA

An Oxygen Radical Absorbance Capacity (ORAC) assay was conducted to assess the antioxidant capacity of **AC Soluble Elastin PF**. As shown in Figure 1, **AC Soluble Elastin PF** exhibited antioxidant activity comparable to 200µM Trolox®. The antioxidant capacity of **AC Soluble Elastin PF** increased as the concentration increased. As a result, we can assure that its ability to minimize oxidative stress is dose dependent and that **AC Soluble Elastin PF** is capable of providing antioxidant properties.

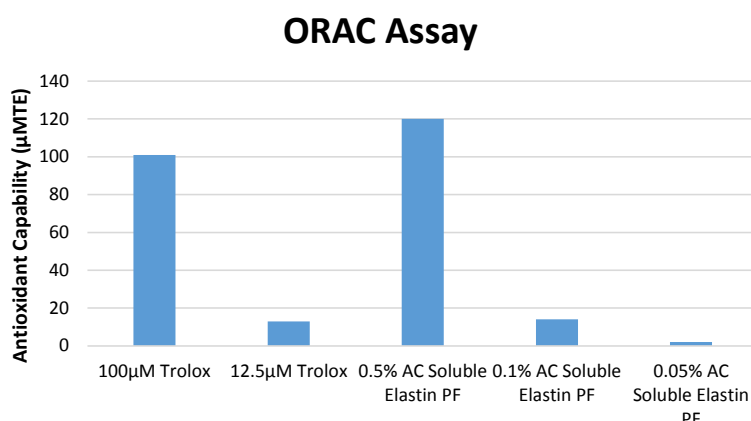


Figure 1. Antioxidant Activity

The cellular viability assay was conducted to assess the ability of **AC Soluble Elastin PF** to increase cellular metabolic activity in cultured dermal fibroblasts. The results in Figure 2 illustrate that at concentrations of 1.0%, 0.1%, and 0.01% **AC Soluble Elastin PF**, nor the preservatives contained therein exhibited any inhibition of cell viability. It can therefore be concluded that at normal use concentrations, **AC Soluble Elastin PF** is not cytotoxic.

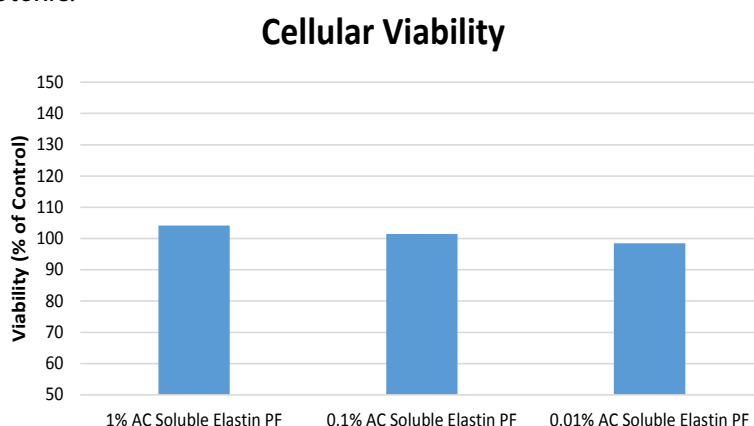


Figure 2. Cellular Viability Assay

### References

- 1) D. Eyre. Et al. 1984. Annual Review of Biochemistry. Cross-Linking in Collagen and Elastin. 53: 717-748
- 2) S. Partridge. Et al. 1955. Journal of Biochemistry. The chemistry of connective tissues. 2. Soluble proteins derived from partial hydrolysis of elastin-\*. 61(1): 11-21