

# AC Hair and Scalp Complex PF



Antioxidant  
great for all hair types  
at every level  
promotes healthy hair follicles  
strengthens hair,  
Anti-Aging Hair Care

## BACKGROUND

Hair is an outward expression of one's inner being. Individuals strive for shiny, yet voluminous, healthy locks. Often when discussing the health of hair we talk about the strands themselves and their appearance. However, the health of hair can also be addressed via the hair follicle. The hair follicle lies below the scalp and is a cellular network for the hair strand, all which are formed in the womb. Like all things, with age the follicle weakens and as a result, can cause hair loss. Simultaneously, the reduction of the active growing phase of hair, the anagen phase, also can lead to hair loss. Although it is normal to shed 40-150 strands of hair per day, the health of the hair is dependent on the health of the hair follicle. Age also thins the subcutaneous fat layer of the scalp leading to more brittle hair and lose shine.

## SCIENCE

The hair fiber originates from the hair bulb which is located at the terminal end of the hair follicle. Within the hair bulb, living papilla cell support the hair fiber and absorb melanin. Blood vessels nourish the cells housed in the hair bulb and allow them to support and grow the hair. As the hair grows through the follicle, it is still living. Using a product that can penetrate into the follicle can allow products to deliver much needed benefits to the growing hair. A key aspect of hair loss with age is the aging of the hair follicle. Increasing collagen and elastin within the hair follicle and bulb can lead to a stronger supportive matrix offering a healthier follicle. Protecting and clarifying the scalp would allow for penetration of treatment for better results. Additionally, the cascades for cellular production of ATP are enhanced improving the ability for the hair to function better during the anagen phase, the growing phase that is often compromised with age.

**Code Number: 11301PF**

**INCI Name:** Water & Saccharum Officinarum (Sugar Cane) Extract & Citrus Limon (Lemon) Fruit Extract & Betaine & Hexylene Glycol & Pyrus Malus (Apple) Fruit Extract & Camellia Sinensis Leaf Extract & Hexapeptide-11

**INCI Status:** Conforms

**REACH Status:** Complies

**CAS Number:** 7732-18-5 & 91722-22-4 & 84929-31-7 & 107-43-7 & 107-41-5 & 85251-63-4 & 84650-60-2 & 100684-36-4

**EINECS Number:** 231-791-2 & 294-424-5 & 284-515-8 & 203-490-6 & 203-489-0 & 286-475-7 & 283-519-7 & 309-709-2

**Origin:** Botanical and Synthetic

**Processing:**

GMO Free  
No Ethoxylation  
No Irradiation  
No Sulphonation

**Additives:**

Antioxidants: None  
Other additives: None

**Solvents Used:** Water

**Appearance:** Clear Colorless Liquid

**Soluble/ Miscible:** Water Soluble

**Microbial Count:** < 100CFU/g,  
No Pathogens

**Suggested Use Levels:** 1.0 - 5.0%

**Suggested Applications:**

Promotes Healthy Hair,  
Strengthens Hair, Improvements in  
Hair Follicle Health

**Benefits of AC Hair and Scalp Complex PF:**

- Improves Health of Follicle
- Anti-Aging Hair Care
- Reduction in hair lose

# AC Hair and Scalp Complex

## BENEFITS

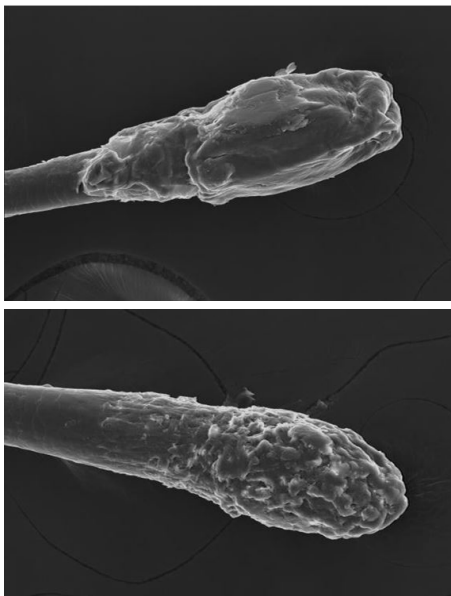
**AC Hair and Scalp Complex PF** addresses hair loss and lackluster at the root! **AC Hair and Scalp Complex PF** promotes cellular renewal at the scalp to clear the follicle of excess build up and allowing room for deeper product penetration and healthier hair growth. The improvement in collagen that **AC Hair and Scalp Complex PF** offers strengthens the the extracellular matrix of the hair bulb allowing for a healthier more capable, supportive bulb. Aging hair has met its match with **AC Hair and Scalp Complex PF!**

## EFFICACY DATA

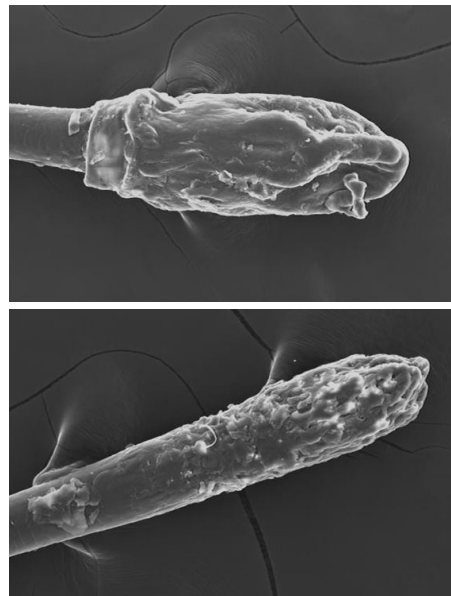
The hair follicle, portion of the hair that lies below the scalp, is the living portion of the hair system. This bulb is full of cellular activity and key for producing healthy, thick, full hair. The aging of the hair follicle can create loss of hair yielding unhealthy thinning locks. This study was conducted to determine if **AC Hair and Scalp Complex PF** is capable of improving the integrity of the hair follicle thus leading to fuller, thicker hair.

Standard Electron Microscopy (SEM) imaging shows high resolution images of the hair bulb itself. The SEM images depict how the bulb is positively effected when treated with 5.0% **AC Hair and Scalp Complex PF**. The imagery clearly demonstrates that the treated bulb exhibits a 'younger' appearance which includes a healthier, in tact bulb which is noticeably larger and smoother. The untreated bulbs elicit rigid, small, less uniform bulb. At a singular level, one bulb may not seem important, but these bulb to bulb imperfections contribute to a much bigger picture of unhealthy, thin, aged hair. In just 5 days, a significant improvement is visible deeming **AC Hair and Scalp Complex PF** ideal for inhibiting loss of hair through strengthening the hair follicle.

Withing the same study, participants answered a questionnaire on Day 5, reporting softer, smoother hair. Also, participants felt the treated side was easier to comb. This was a blind study yet participants still identified the treated side as more desirable without knowledge of the bulb to bulb comparisons.



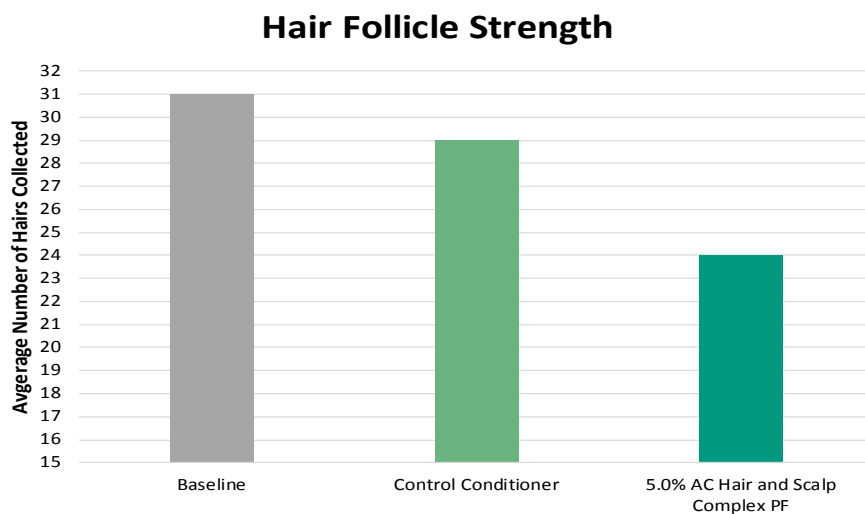
**Figure 1 & 2.** Top- five days after hair was treated with **AC Hair and Scalp Complex PF**. Botton-five days after hair was treated with control.



**Figure 3 & 4.** Top- five days after hair was treated with **AC Hair and Scalp Complex PF**. Botton-five days after hair was treated with control.

# AC Hair and Scalp Complex

Also, within the same study, the combing data was compared, the treated vs. untreated vs. baseline strand count can be seen in Figure 5. A 22% improvement can be seen on the side which was treated with **AC Hair and Scalp Complex PF**. A reduction in hair collected in just five days time was exhibited. This data makes it evident that **AC Hair and Scalp Complex PF** improves the overall health of the hair follicle which can lead to a reduction in loss of hair and an increase in the penetration potential of actives into the follicle.



**Figure 5.** Results of a 5 day *in-vivo* efficacy study evaluating hair follicle strength.