

## AC Rice Curl Complex PF Efficacy Data

**Code:** 20650PF  
**INCI Name:** Water & Lactobacillus/Tomato Fruit Ferment Extract & Oryza Sativa (Rice) Extract & Keratin Amino Acids & Acyl Coenzyme A Desaturase  
**CAS #:** 7732-18-5 & 90131-63-8 & 68553-81-1 & 65072-01-7 & 85-61-0  
**EINECS #:** 231-791-2 & 290-375-9 & N/A & N/A & 201-619-0

Type of Study	Results
Curl Retention Study	The results indicate that after 18 hours, the hair swatches treated with <b>AC Rice Curl Complex PF</b> had a 12% improvement in curl retention compared to the control. This clearly indicates that <b>AC Rice Curl Complex PF</b> can be added to hair care applications to enhance curl retention. Additionally, it can be used to help condition, hydrate and protect curly hair, all of which are beneficial to the retention of curl.

# AC Rice Curl Complex PF Curl Retention Assay

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

## Abstract

**AC Rice Curl Complex PF** was designed to deliver protection and optimize the integrity of the hair while enhancing curl retention. It contains a blend of rice amino acids, stearyl CoA-desaturase (SCD-1), tomato bioferment and keratin amino acids, which work synergistically to improve and protect the hair. The rice amino acids help condition and hydrate the hair to enhance its integrity and reduce moisture loss. SCD-1 is an enzyme that converts saturated fatty acids on the hair to unsaturated fatty acids, causing changes to the melting point of fatty acids on the hair, improving flexibility and curl retention. Tomato bioferment contains a unique, bi-enzyme complex that helps repair oxidized sulfhydryl groups which helps strengthen and improve the structure of the follicle to ultimately improve curl. The addition of keratin amino acids act as a humectant to further hydrate the hair while helping it appear smooth and polished. Given the nature of curly hair, it is more prone to damage and breakage than straight hair. When hair fibers are damaged, the cuticle lifts and the hair becomes dry, brittle, dull, and difficult to manage. A study was conducted to demonstrate the benefits of incorporating **AC Rice Curl Complex PF** into hair formulations to enhance curl retention while conditioning, hydrating and protecting curly hair.

## Materials and Methods

Clean, virgin brown tresses were treated with 5.0% **AC Rice Curl Complex PF** in an aqueous solution. Other hair swatches were treated with water as the control. All hair swatches were then dried under ambient conditions. After combing 10 times, each swatch was then curled using a curling iron. The length of each hair swatch was then measured over a period of 18 hours.

**Percent (%) Retention** =  $100 - [(Tress\ length\ after\ "x"hours - Tress\ length\ immediately\ after\ curling) / Tress\ length\ after\ "x"hours] * 100$

## Results

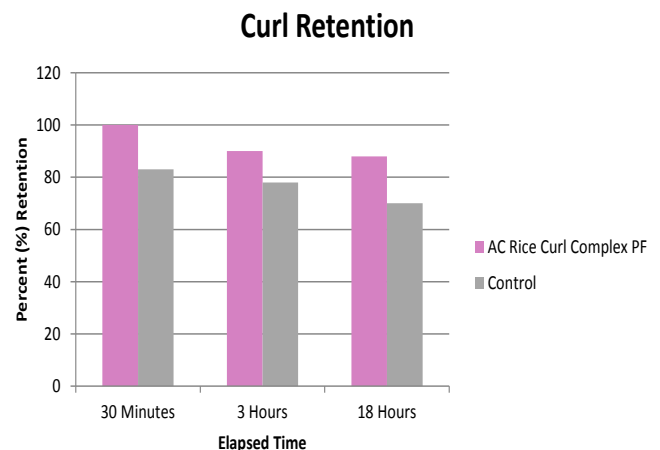


Figure 1. Comparative Retention of Curls Over Time

## Discussion

The results indicate that after 18 hours, the hair swatches treated with **AC Rice Curl Complex PF** had a 12% improvement in curl retention compared to the control. This clearly indicates that **AC Rice Curl Complex PF** can be added to hair care applications to enhance curl retention. Additionally, it can be used to help condition, hydrate and protect curly hair, all of which are beneficial to the retention of curl.