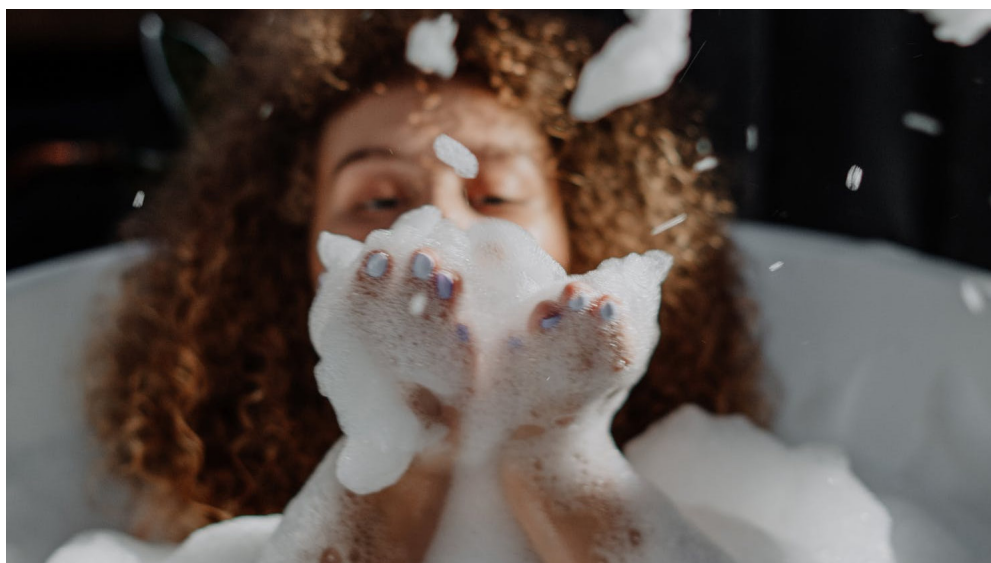


Salon Half-Head Hair Study



Conditioning
 Natural Skin & Hair Care
 Enhances Shine
 Mild Foaming Smoothing
 Gentle Cleansing

ABSTRACT

The condition of the cuticle (the outer most layer of the hair) significantly affects both the manageability and sleekness of our hair. Over time, hair can become damaged, which can result in the cuticle lifting because of both environmental and styling influences and processes. The result: lifeless, dull hair that is difficult to manage. Improving the sleekness of hair has been shown to instantly create a healthier more youthful appearance. Increasing combability not only eases manageability, but also helps to minimize damage that perpetuates the loss of body and difficulty in styling.

AC Foaming Collagen PF is a product designed to nourish the scalp and provide hydration and moisturizing benefits to the skin and hair. This ingredient also enhances smoothing, wet and dry combability, anti-frizz, overall feel, shine and hydration. The purpose of this study was to confirm whether **AC Foaming Collagen PF** is capable of providing benefits when included in a shampoo and conditioner.

A half head study was conducted to determine the comparison of a control shampoo vs. 2.0% **AC Foaming Collagen PF** in the control shampoo. Additionally, a comparison between the control conditioner and 2.0% **AC Foaming Collagen PF** in the control conditioner were reported. Each volunteer's hair was photographed prior to the treatment and again after the shampoo and conditioner had been applied and the hair was styled. The images of the half head study were used in conjunction with a sensory assessment subjectively rating the parameters - cleansing, smoothing, dry and wet combability, anti-frizz, overall feel, shine and hydration. This assessment was conducted both before and after treatment. Based on the results obtained, **AC Foaming Collagen PF** is capable of enhancing smoothness, wet and dry combability, anti-frizz, overall feel, shine and hydration when used in a conditioner. These attributes makes it an ideal ingredient for use in products intended for thick, unruly or ethnic hair types.

Code Number: 20339PF

INCI Name: Potassium Cocoyl
 Hydrolyzed Collagen
INCI Status: Conforms
REACH Status: Complies
CAS Number: 68920-65-0
EINCS Number: N/A

TRF#: S19

Lot Number(s):
 #NC150511-I & #NC150511-J

Suggested Use Levels: 1.0 - 10.0%
Use Level for Assay: 2.0%

Sponsor:

Active Concepts, LLC
 107 Technology Drive
 Lincolnton, North Carolina 28092

Study Director: Maureen Danaher
Principle Investigator: Candice Sneed

Suggested Applications:

Moisturizing, Conditioning, Mild
 Foaming

Benefits of **AC Foaming Collagen PF**:

- Conditioning
- Gentle Cleansing
- Skin and Hair Care Applications

Salon Half-Head Hair Study

MATERIALS AND METHODS

The study was conducted using five participants. Each subject had their baseline photo taken prior to having their hair washed. The participant was also asked to complete a survey rating their hair prior to treatment on a scale of 1 to 10, with 1 being the lowest and 10 being the highest, using the following parameters cleansing, smoothing, dry and wet combability, anti-frizz, overall feel, shine and hydration.

Half of the head was treated with the control shampoo and conditioner while the other half of the head was treated with 2.0% **AC Foaming Collagen PF** in the base shampoo and base conditioner. After the application and rinse of the test and positive control products, each participant's hair was blown dry using a round brush on both sides of the head. Once the hair was completely dry, the participant was asked to again assess the same parameters of both halves of their hair. The parameters tested for shampoo are cleansing, smoothing, and wet combability, while the parameters tested for conditioner are smoothing, wet combability, dry combability, anti-frizz, overall feel, shine, and hydration. An X is placed where the parameter is not assessed. Assessments were made using a rubric from 1 to 10, with 1 being the lowest and 10 being the highest.

RESULTS

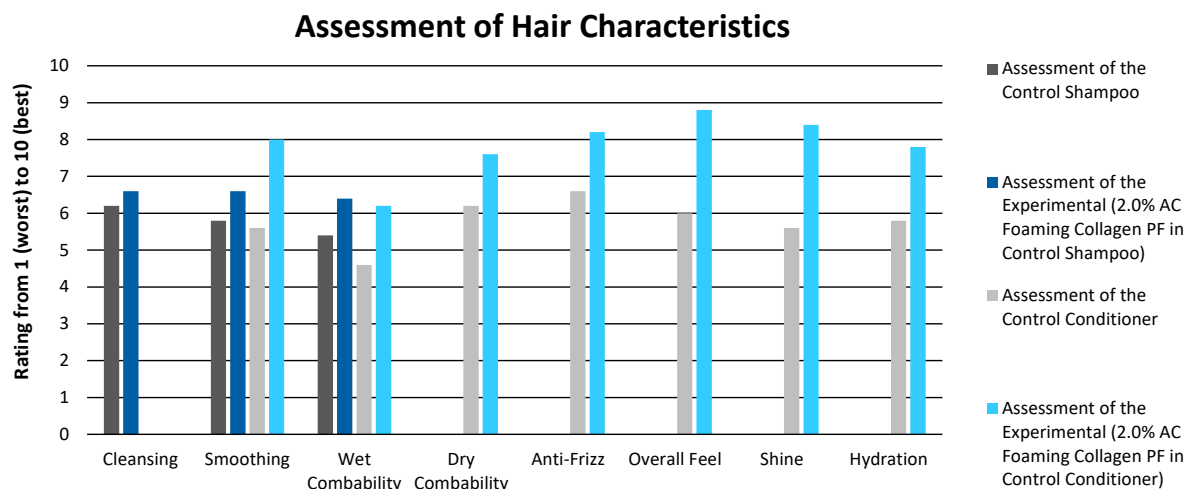
Parameters Tested	Assessment of the Control Shampoo	Assessment of the Experimental (2.0% AC Foaming Collagen PF in Control Shampoo)	Assessment of the Control Conditioner	Assessment of the Experimental (2.0% AC Foaming Collagen PF in Control Conditioner)
Cleansing	6.20	6.60	X	X
Smoothing	5.80	6.60	5.60	8.00
Wet Combability	5.40	6.40	4.60	6.20
Dry Combability	X	X	6.20	7.60
Anti-Frizz	X	X	6.60	8.20
Overall Feel	X	X	6.00	8.80
Shine	X	X	5.60	8.40
Hydration	X	X	5.80	7.80
Mean	5.80	6.53	5.77	7.86

Chart 1. Average Results for Participant's Sensory Assessment

Parameters Tested	Percent Difference – Comparison of Control Shampoo vs. Experimental (2.0% AC Foaming Collagen PF in Control Shampoo)	Percent Difference – Comparison of Control Conditioner vs. Experimental (2.0% AC Foaming Collagen PF in Control Conditioner)
Cleansing	6%	X
Smoothing	13%	35%
Wet Combability	17%	30%
Dry Combability	X	20%
Anti-Frizz	X	22%
Overall Feel	X	38%
Shine	X	40%
Hydration	X	29%
Mean	12%	31%

Chart 2. Percent Difference of Participant's Sensory Assessment

Salon Half-Head Hair Study



Graph 1. Rating of hair characteristics following sensory assessment



Figure 1. Full head Baseline, Untreated Hair

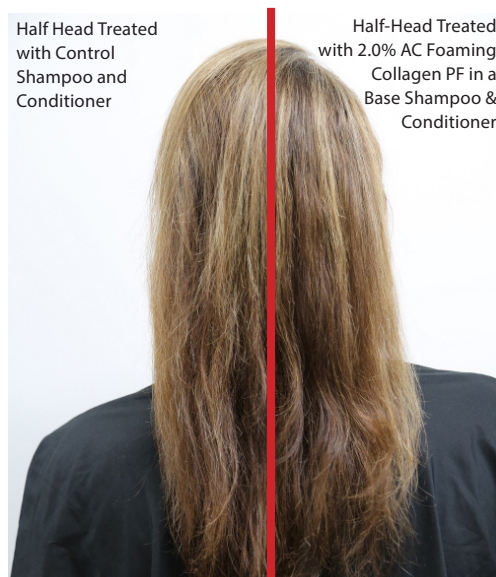


Figure 2. Half Head Treated



Figure 3. Full head Baseline, Untreated Hair

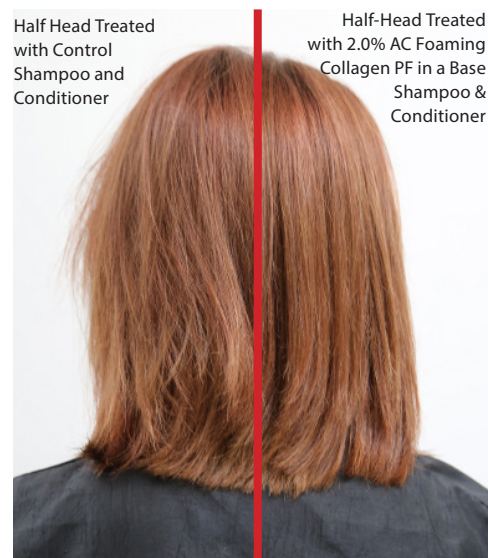


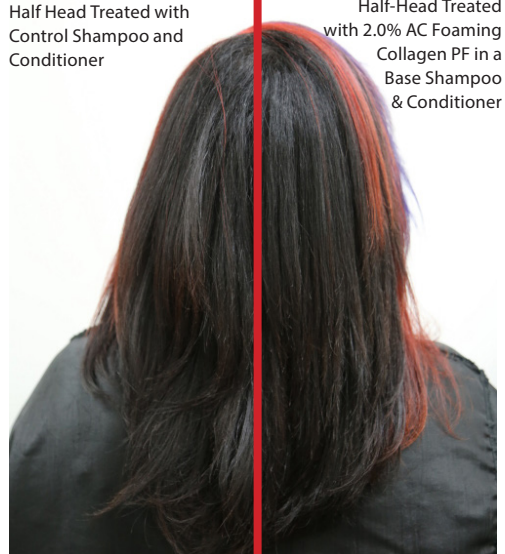
Figure 4. Half Head Treated

Salon Half-Head Hair Study



Figure 5. Full head Baseline, Untreated Hair

Half Head Treated with
Control Shampoo and
Conditioner



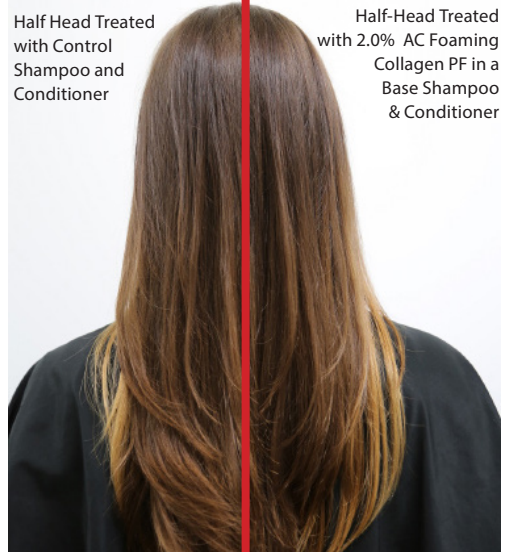
Half-Head Treated
with 2.0% AC Foaming
Collagen PF in a
Base Shampoo
& Conditioner

Figure 6. Half Head Treated



Figure 7. Full head Baseline, Untreated Hair

Half Head Treated
with Control
Shampoo and
Conditioner



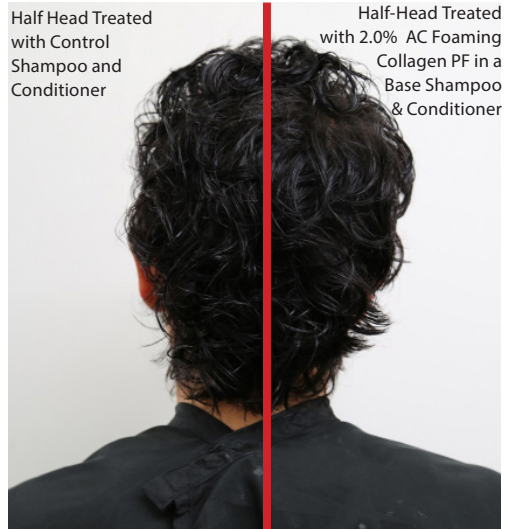
Half-Head Treated
with 2.0% AC Foaming
Collagen PF in a
Base Shampoo
& Conditioner

Figure 8. Half Head Treated



Figure 9. Full head Baseline, Untreated Hair

Half Head Treated
with Control
Shampoo and
Conditioner



Half-Head Treated
with 2.0% AC Foaming
Collagen PF in a
Base Shampoo
& Conditioner

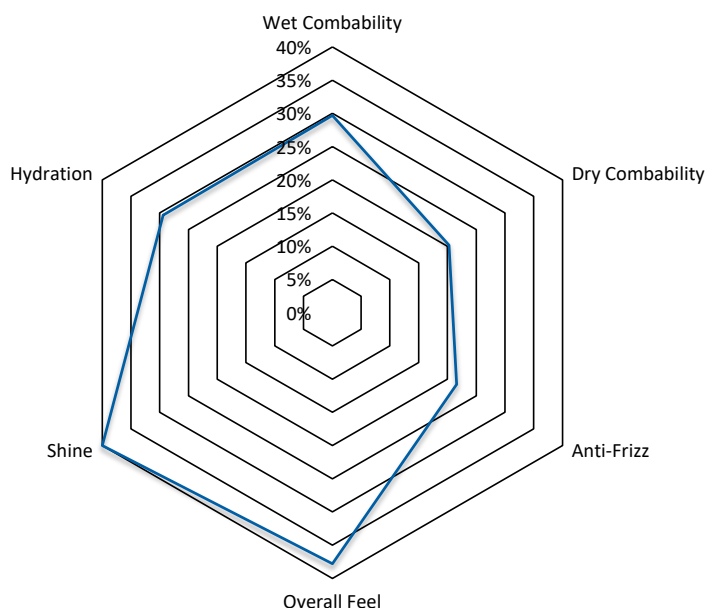
Figure 10. Half Head Treated

Salon Half-Head Hair Study

When comparing hair characteristics of the baseline assessments to the post style assessments, the benefits of including 2.0% **AC Foaming Collagen PF** in a conditioner are even more apparent. In relation to the baseline readings, the test-half of the head improved the intended subjective parameters, improving smoothing, wet and dry combability, anti-frizz, overall feel, shine and hydration by 35%, 30%, 20%, 22%, 38%, 40%, and 29%, respectively. It is clear from the images in this study that **AC Foaming Collagen PF** helps create a smooth, sleek hairstyle. In all images, the hair is noticeably shinier, with less frizz and has a more hydrated appearance.

The professional stylist who performed the actual tests by applying the product, styling the hair and documenting the images said **AC Foaming Collagen PF** is great for smoothing frizzy, unruly hair. This product can provide gentle cleansing while enhancing the shine and overall feel of styled hair. The product is lightweight and would be perfect for applications targeting fine hair. **AC Foaming Collagen PF** is good for use in a leave on application or shampoo and conditioner for perceivable benefits.

Comparison of Control Conditioner vs. Experimental



Graph 2. Hair Assessment results for sensory characteristics

DISCUSSION

The results of the assessment indicate that when incorporated into a shampoo, 2.0% **AC Foaming Collagen PF** did show improvement in the parameters tested. However, when used in a conditioner **AC Foaming Collagen PF** is capable of improving smoothing, wet and dry combability, anti-frizz, overall feel, shine and hydration more than the control conditioner. These results can be further supported by figures 1 through 10, where clearly the half of the subject's head treated with 2.0% **AC Foaming Collagen PF** appears sleek, smooth, less frizzy, and hydrated. Additionally, the subjects reported a significant increase in smoothness, shine and overall feel of the hair.