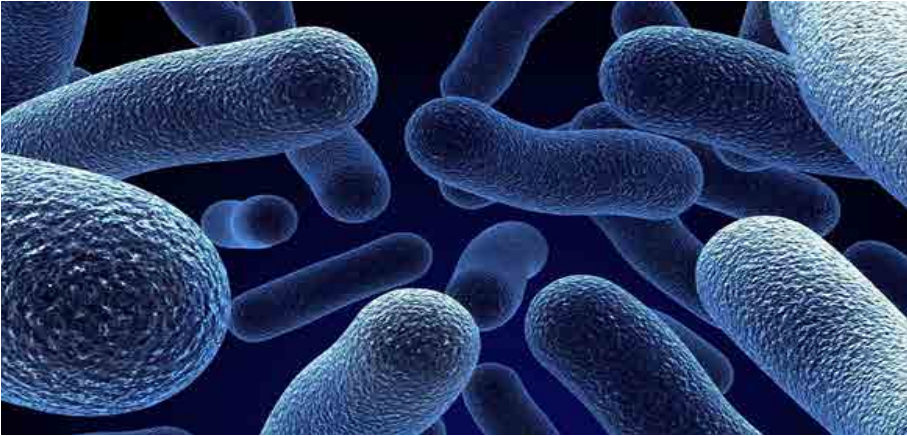


Salon Half-Head Hair Study



capable of speeding up the
Repair Process
 optimizing moisture levels +
 simultaneously **increasing**
the rate of cellular renewal
 capitalize on **probiotic** marketability
trending in both skin and hair care product lines!

ABSTRACT

The condition of the cuticle (the outer most layer of the hair) significantly affects both the manageability and sleekness of our hair. Overtime, 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 physical damage that perpetuates the loss of body and difficulty in styling.

Probacillus Revive is a product designed to provide moisturizing and conditioning benefits to the skin and hair. Its gentle cleansing benefits make it perfect for sensitive skin and scalp care applications. However, this unique ingredient also enhances smoothing, wet and dry combability, anti-frizz overall feel, shine and hydration when used in hair care applications. The purpose of this study was to confirm whether **Probacillus Revive** is capable of providing benefits when included in a shampoo and conditioner on ethnic hair types.

A half head study was conducted to determine the comparison of a control shampoo vs. 2.0% **Probacillus Revive** in the control shampoo. Additionally, a comparison between the control conditioner and 2.0% **Probacillus Revive** 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, **Probacillus Revive** is capable of enhancing the smoothing, wet and dry combability, anti-frizz, overall feel, shine and hydration, making it an ideal ingredient for use in products intended for thick, unruly or ethnic hair types.

Code Number: 16618

INCI Name: Lactobacillus Ferment Lysate

INCI Status: Conforms

REACH Status: Complies

CAS Number: N/A

EINCS Number: N/A

TRF#: S14

Lot Number(s):

NC150409-B, NC150409-B

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: Erica Segura

Principle Investigator:

Maureen Danaher

Suggested Applications:

Moisturizing, Smoothing, Anti-Frizz

Benefits of AC Foaming Wheat PF:

- Moisturizing
- Anti-Frizz
- Smoothing
- Soothing

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% **Probacillus Revive** 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. 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% Probacillus Revive in Control Shampoo)	Assessment of the Control Conditioner	Assessment of the Experimental (2.0% Probacillus Revive in Control Conditioner)
Cleansing	4.80	5.80	X	X
Smoothing	5.00	5.40	5.60	5.70
Wet Combability	5.80	5.80	6.20	6.80
Dry Combability	X	X	5.40	6.80
Anti-Frizz	X	X	5.00	8.40
Overall Feel	X	X	5.20	8.40
Shine	X	X	4.80	7.40
Hydration	X	X	4.80	7.60
Mean	5.20	5.60	5.29	7.30

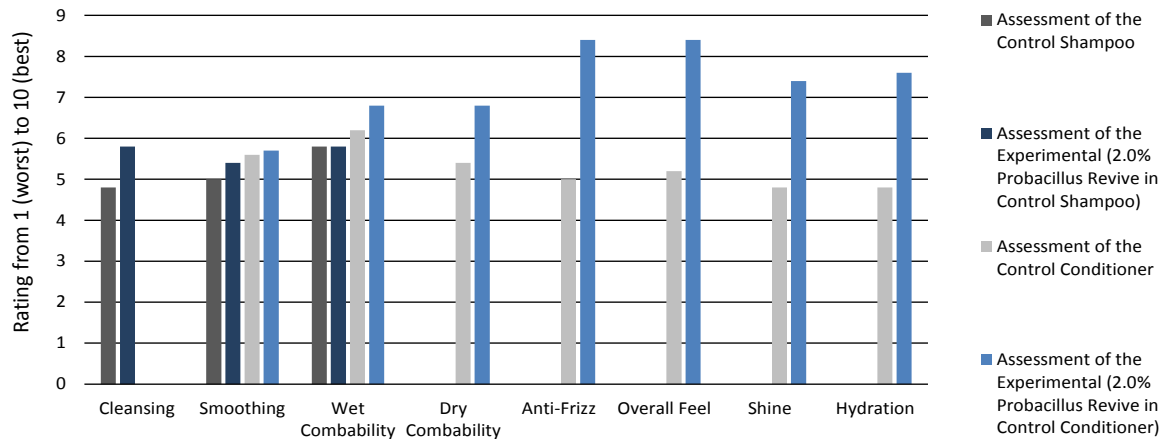
Chart 1. Average Results for Participant's Sensory Assessment

Parameters Tested	Percent Difference – Comparison of Control Shampoo vs. Experimental (2.0% Probacillus Revive in Control Shampoo)	Percent Difference – Comparison of Control Conditioner vs. Experimental (2.0% Probacillus Revive in Control Conditioner)
Cleansing	18%	X
Smoothing	0%	0%
Wet Combability	0%	15%
Dry Combability	X	33%
Anti-Frizz	X	46%
Overall Feel	X	46%
Shine	X	33%
Hydration	X	46%
Mean	6%	31%

Chart 2. Percent Difference of Participant's Sensory Assessment

Salon Half-Head Hair Study

Assessment of Hair Characteristics



Graph 1. Rating of hair characteristics following sensory assessment



Figure 1. Full head Baseline, Untreated Hair

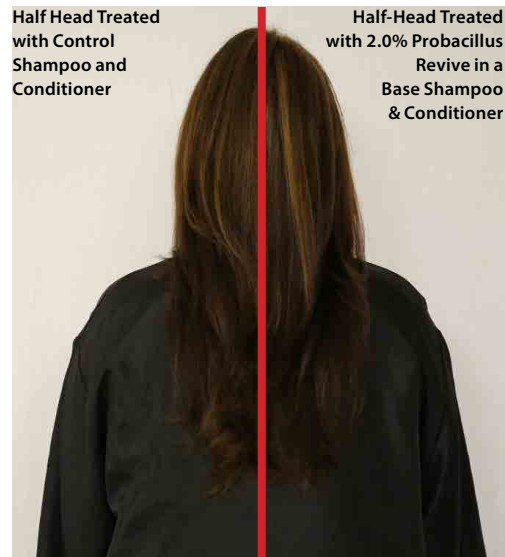


Figure 2. Half Head Treated



Figure 3. Full head Baseline, Untreated Hair



Figure 4. Half Head Treated

Salon Half-Head Hair Study



Figure 5. Full head Baseline, Untreated Hair



Figure 6. Half Head Treated



Figure 7. Full head Baseline, Untreated Hair



Figure 8. Half Head Treated



Figure 9. Full head Baseline, Untreated Hair

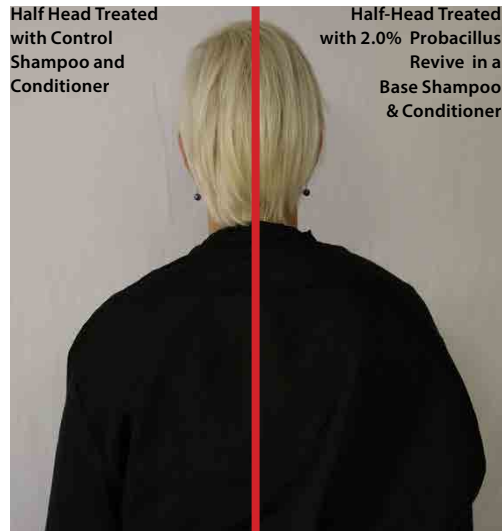


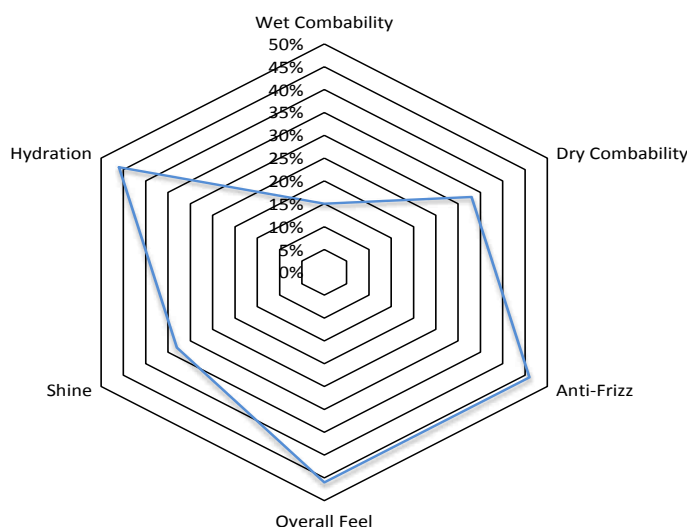
Figure 10. Half Head Treated

Salon Half-Head Hair Study

When comparing hair characteristics of the baseline assessments to the post style assessments, the benefits of including 2.0% **Probacillus Revive** in a shampoo and conditioner are even more apparent. In relation to the baseline readings, the test-half of the head improved the intended subjective parameters, improving wet and dry combability, anti-frizz, overall feel, shine and hydration by 15%, 33%, 46%, 46%, 33%, 46% and 40%, respectively. It is clear from the images in this study that **Probacillus Revive** helps create a smooth, sleek hairstyle. Additionally, in all images, the hair is noticeably shinier, less frizzy 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 **Probacillus Revive** 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. **Probacillus Revive** can be used 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% **Probacillus Revive** did show improvement in cleansing and smoothing. However, when used in a conditioner **Probacillus Revive** 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% **Probacillus Revive** appears shiny, smooth, less frizzy and hydrated. Additionally, the subjects reported a significant increase in smoothness and overall feel of the hair.