

Salon Half-Head Hair Study



Glycoprotein
Topical & Botanical
Skin, Hair & Scalp Care
Lactobacillus Antioxidant
Fermentation

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.

ACB Yerba Santa Glycoprotein PF is a product designed to provide exfoliation and conditioning benefits. However, this unique ingredient also enhances cleansing, smoothing, dry and wet combability, anti-frizz, overall feel, shine and hydration when used in hair care products. The purpose of this study was to confirm whether **ACB Yerba Santa Glycoprotein PF** 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% **ACB Yerba Santa Glycoprotein PF** in the control shampoo. Additionally, a comparison between the control conditioner and 2.0% **ACB Yerba Santa Glycoprotein 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, **ACB Yerba Santa Glycoprotein PF** is capable of enhancing cleansing, smoothing, wet and dry combability, anti-frizz, overall feel, shine and hydration of the hair. These attributes makes it an ideal ingredient for use in products intended for any hair types, especially ethnic, thick or unruly hair.

Code Number: 20342PF

INCI Name: Lactobacillus/Eriodictyon Californicum Ferment Extract
INCI Status: Conforms
REACH Status: Complies
CAS Number: 68990-14-7
EINECS Number: 273-580-8

TRF#: S43

Lot Number(s):
#NC151207-B, #NC151207-C

Suggested Use Levels: 1.0 - 5.0%
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:

Moisturization, Enhance Epidermal Slip, Antioxidant, Increase Cellular Viability

Benefits of **ACB Yerba Santa Glycoprotein PF**:

- Enhance Aesthetics
- Intense Moisturization
- Hydration & Lubricity

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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% **ACB Yerba Santa Glycoprotein 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. 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% ACB Yerba Santa Glycoprotein PF in Control Shampoo)	Assessment of the Control Conditioner	Assessment of the Experimental (2.0% ACB Yerba Santa Glycoprotein PF in Control Conditioner)
Cleansing	7.00	8.00	X	X
Smoothing	4.00	4.00	6.00	8.00
Wet Combability	3.00	3.00	7.00	8.00
Dry Combability	X	X	7.00	8.00
Anti-Frizz	X	X	7.00	8.00
Overall Feel	X	X	7.00	8.00
Shine	X	X	6.00	8.00
Hydration	X	X	6.00	7.00
Mean	4.66	5.00	6.57	7.86

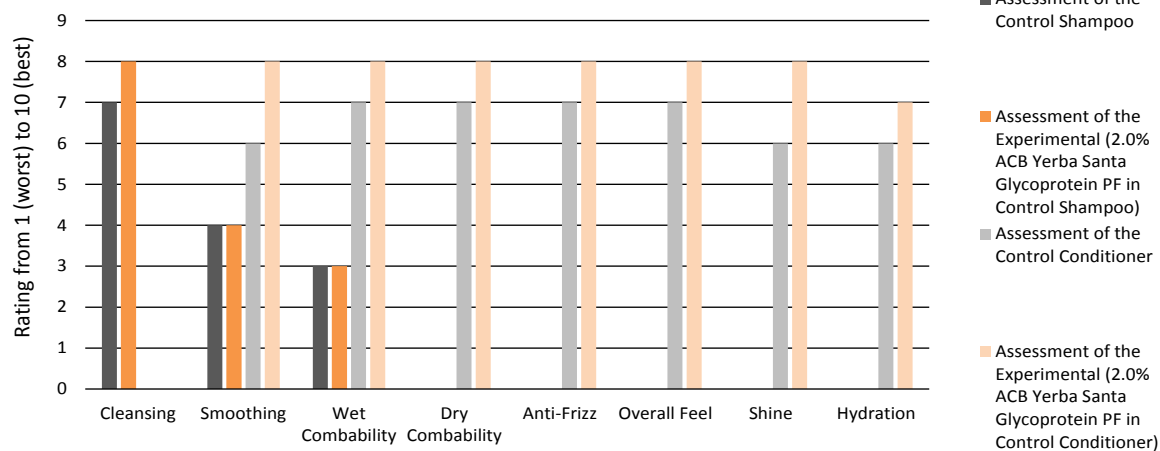
Chart 1. Average Results for Participant's Sensory Assessment .

Parameters Tested	Percent Difference – Comparison of Control Shampoo vs. Experimental (2.0% ACB Yerba Santa Glycoprotein PF in Control Shampoo)	Percent Difference – Comparison of Control Conditioner vs. Experimental (2.0% ACB Yerba Santa Glycoprotein PF in Control Conditioner)
Cleansing	13%	X
Smoothing	0%	29%
Wet Combability	0%	13%
Dry Combability	X	13%
Anti-Frizz	X	13%
Overall Feel	X	13%
Shine	X	29%
Hydration	X	15%
Mean	13%	18%

Chart 2. Percent Difference of Participant's Sensory Assessment.

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Assessment of Hair Characteristics



Graph 1. Rating of hair characteristics following sensory assessment.



Figure 1. Full head Baseline, Untreated Hair.

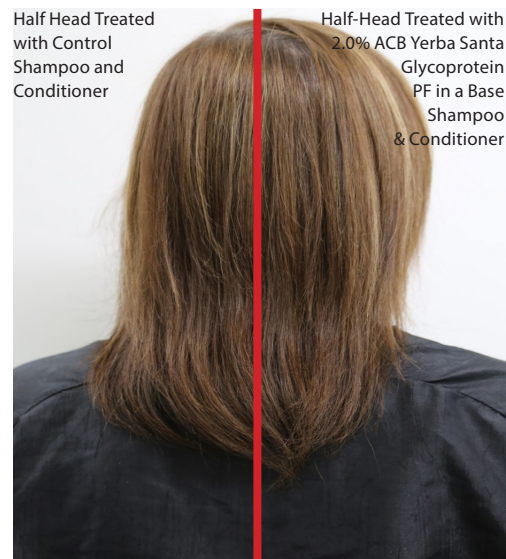


Figure 2. Half Head Treated.



Figure 3. Full head Baseline, Untreated Hair.



Figure 4. Half Head Treated.

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Figure 5. Full head Baseline, Untreated Hair.



Figure 6. Half Head Treated.



Figure 7. Full head Baseline, Untreated Hair.

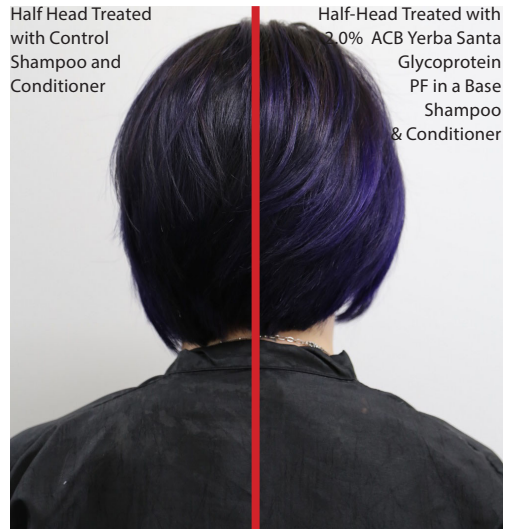


Figure 8. Half Head Treated.



Figure 9. Full head Baseline, Untreated Hair.

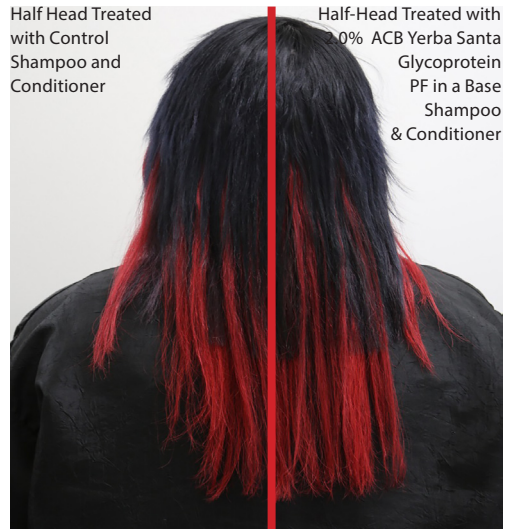


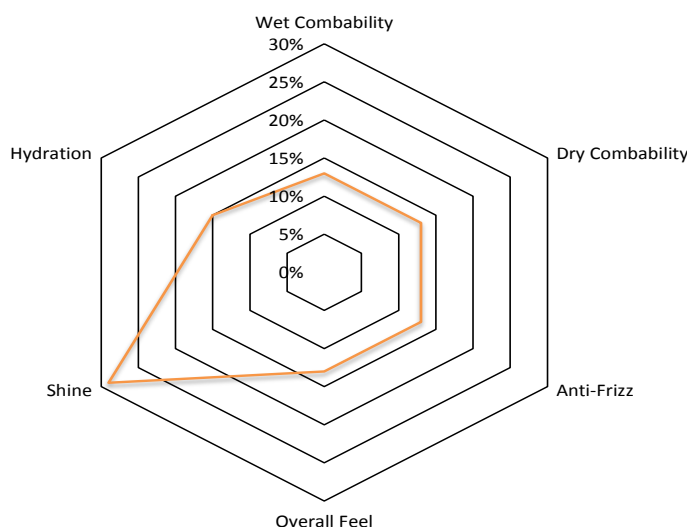
Figure 10. Half Head Treated.

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When comparing hair characteristics of the baseline assessments to the post style assessments, the benefits of including 2.0% **ACB Yerba Santa Glycoprotein PF** 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 cleansing, smoothing, wet and dry combability, anti-frizz, overall feel, shine and hydration by 13%, 29%, 13%, 13%, 13%, 13%, 29% and 15%, respectively. It is clear from the images in this study that **ACB Yerba Santa Glycoprotein PF** helps create a smooth, sleek hairstyle. Additionally, in all images, the hair is noticeably shinier and has a more conditioned appearance.

The professional stylist who performed the actual tests by applying the product, styling the hair and documenting the images said **ACB Yerba Santa Glycoprotein PF** is great for improved hydration and shine of the hair. The subjects liked the consistency and it seemed to work great in the conditioner application. It was also reported that this product helped improve the color of the hair by hydrating over processed or bleached hair. Perfect for use in treatments to restore damaged hair and provide a youthful, silky feel.

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% **ACB Yerba Santa Glycoprotein PF** did show improvement in cleansing. However, when used in a conditioner **ACB Yerba Santa Glycoprotein PF** is capable of improving smoothing, dry and wet 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% **ACB Yerba Santa Glycoprotein PF** appears healthy and silky smooth. Additionally, the subjects reported a significant increase in smoothness and overall feel of the hair.