

# Salon Half-Head Study



hair smoothing  
 vegan alternative to keratin  
 anti-frizz hydrating  
 improves combability and shine  
 enhances overall hair feel

## 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 physical damage that perpetuates the loss of body and difficulty in styling.

**AC Vegan Keratin OS** is a product designed as a vegan alternative to oil soluble hydrolyzed keratin for skin and hair care. However this unique ingredient also enhances smoothing, wet and dry combability, anti-frizz, overall feel, shine, and hydration. The purpose of this study was to confirm if **AC Vegan Keratin OS** is capable of providing these additional benefits in a shampoo and conditioner application.

A half head study was conducted to determine the comparison of a control shampoo vs. 2.0% **AC Vegan Keratin OS** in the control shampoo. Additionally, a comparison between the control conditioner and 2.0% **AC Vegan Keratin OS** 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 Vegan Keratin OS** is capable of enhancing smoothing, wet and dry combability, anti-frizz, overall feel, shine, and hydration. These attributes make **AC Vegan Keratin OS** an ideal ingredient for use in products intended for all hair types.

**Code Number: 20964**

**INCI Name:** Prunus Armeniaca (Apricot) Kernel Oil & Lens Esculenta (Lentil) Seed Extract & Hydrolyzed Cicer Seed Extract & Chenopodium Quinoa Seed Extract

**INCI Status:** Conforms

**CAS Number:** 68650-44-2 & 90063-40-4 & 92113-26-3 & 225234-01-5

**EINECS Number:** 272-046-1 & 289-998-9 & 295-631-3 & N/A

**TRF#:** HRI 033

**Lot Number(s):** N200924B

**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:

Conditioning, Hydrating, Vegan  
 Alternative to Hydrolyzed Keratin

## Benefits of AC Vegan Keratin OS:

- Increases Hair Hydration
- Reduces Hair Frizz
- Improves Wet and Dry Combability



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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% **AC Vegan Keratin OS** 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% AC Vegan Keratin OS in Control Shampoo)	Assessment of the Control Conditioner	Assessment of the Experimental (2.0% AC Vegan Keratin OS in Control Conditioner)
Cleansing	7.8	8.4	X	X
Smoothing	6.4	7	7.8	8.6
Wet Combability	6.8	7.4	6.8	8.2
Dry Combability	X	X	7.8	9
Anti-Frizz	X	X	7	9.2
Overall Feel	X	X	7.8	9.2
Shine	X	X	7.4	9
Hydration	X	X	7.4	9.2
Mean	7	7.6	7.9	8.4

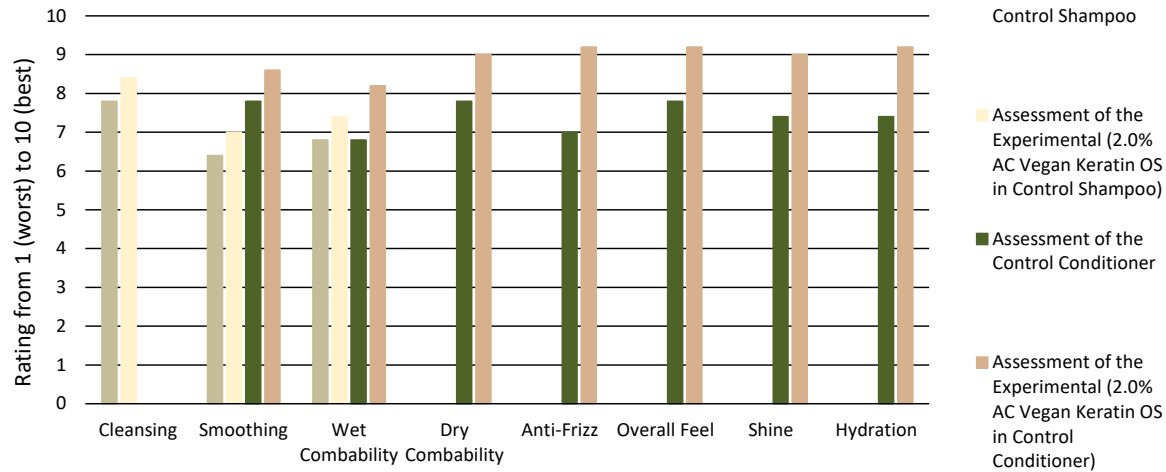
Chart 1. Average Results for Participant's Sensory Assessment.

Parameters Tested	Percent Difference – Comparison of Control Shampoo vs. Experimental (2.0% AC Vegan Keratin OS in Control Shampoo)	Percent Difference – Comparison of Control Conditioner vs. Experimental (2.0% AC Vegan Keratin OS in Control Conditioner)
Cleansing	7%	X
Smoothing	9%	10%
Wet Combability	8%	19%
Dry Combability	X	14%
Anti-Frizz	X	27%
Overall Feel	X	16%
Shine	X	20%
Hydration	X	22%

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

# Salon Half-Head Study

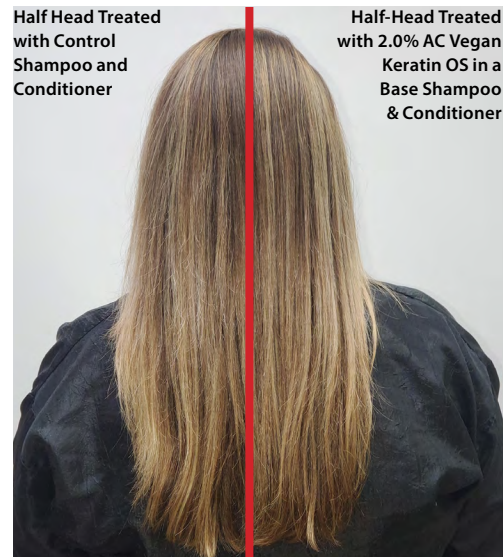
## Assessment of Hair Characteristics



**Graph 1.** Rating of hair characteristics following sensory assessment.



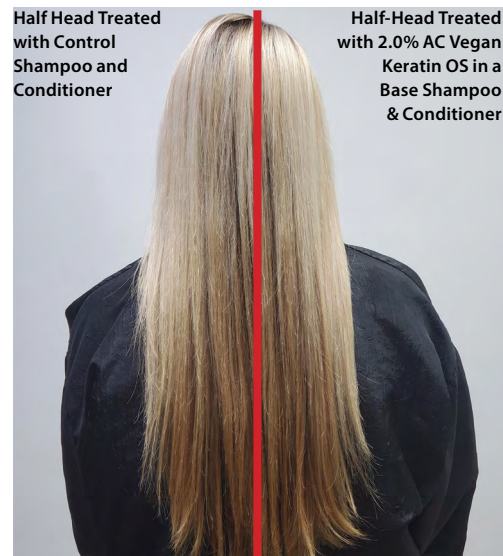
**Figure 1.** Full Head Baseline, Untreated Hair.



**Figure 2.** Half Head Treated.



**Figure 3.** Full Head Baseline, Untreated Hair.



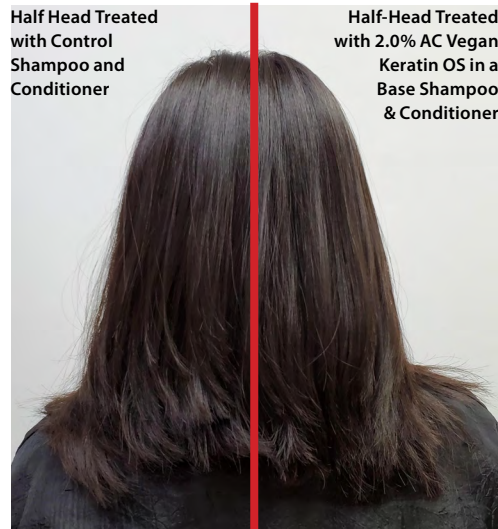
**Figure 4.** Half Head Treated.



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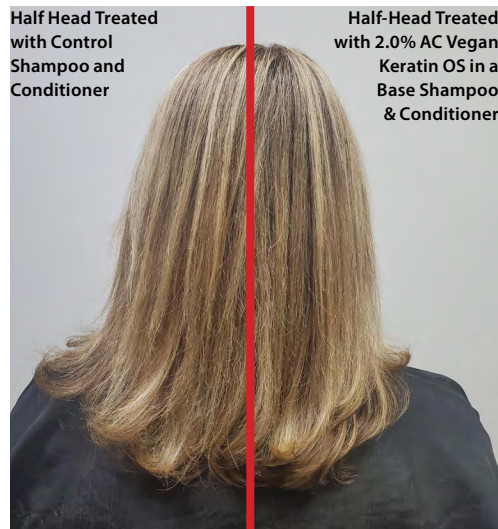
**Figure 5. Full Head Baseline, Untreated Hair.**



**Figure 6. Half Head Treated.**



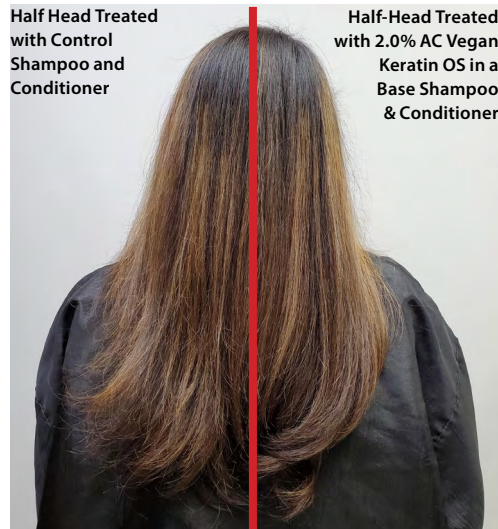
**Figure 7. Full Head Baseline, Untreated Hair.**



**Figure 8. Half Head Treated.**



**Figure 9. Full Head Baseline, Untreated Hair.**



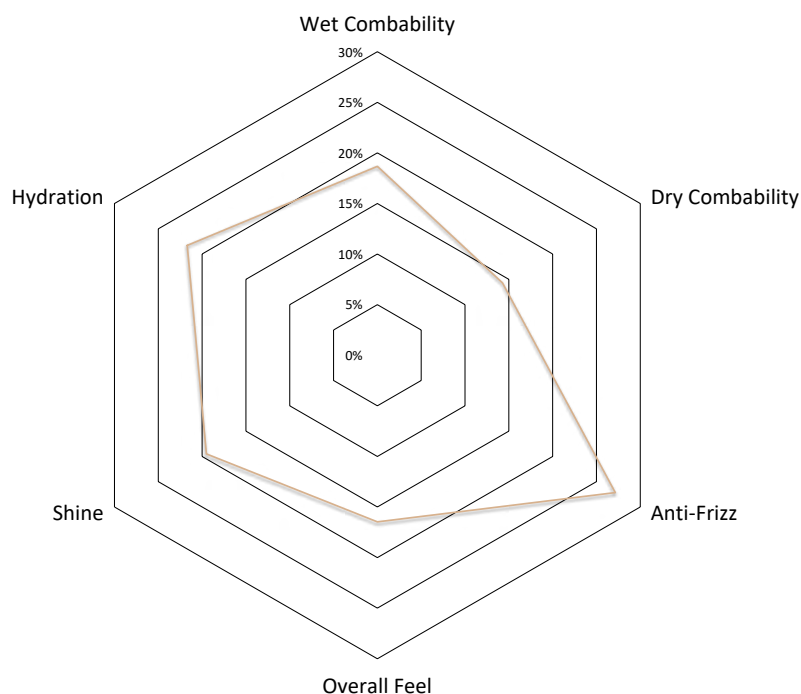
**Figure 10. Half Head Treated.**

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When comparing hair characteristics of the baseline assessments to the post style assessments, the benefits of including 2.0% **AC Vegan Keratin OS** in a shampoo and conditioner are even more apparent. In relation to the baseline readings, the test-half of the head treated with conditioner improved the intended subjective parameters, smoothing, wet and dry combability, anti-frizz, overall feel, shine, and hydration by 10.0%, 19.0%, 14.0%, 27.0%, 16.0%, 20.0%, and 22.0% respectively. It is clear from the images in this study that **AC Vegan Keratin OS** helps create a smooth, sleek hairstyle. Additionally, in all images, the hair is noticeably hydrated and offers a revitalized appearance.

The professional stylist who performed the actual tests by applying the product, styling the hair and documenting the images said **AC Vegan Keratin OS** is ideal for improving the combability and hydration of the hair, as well as reducing frizz and enhancing shine.

## Comparison of Control Conditioner vs. Experimental (2.0% AC Vegan Keratin OS in Control Conditioner)



**Graph 2.** Hair assessment results for sensory characteristics in conditioner.

## DISCUSSION

The results of the assessment indicate that when incorporated into a shampoo, 2.0% **AC Vegan Keratin OS** did show improvement in cleansing, smoothing, and wet combability. Additionally, when used in a conditioner **AC Vegan Keratin OS** 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% **AC Vegan Keratin OS** in shampoo and conditioner appears healthy and smooth.