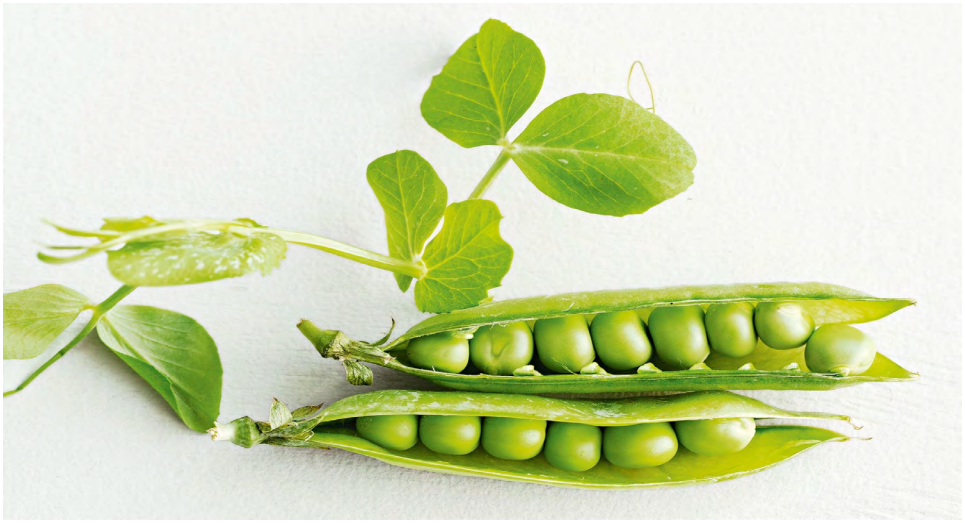
Salon Half-Head Study



pisum sativum
key to anti-aging hair care
volumizing .Hydrating
film former + moisturizing
with efficacious
antioxidant protection

Code Number: 16810

INCI Name: Pisum Sativum (Pea) Peptide
INCI Status: Conforms
REACH Status: Complies
CAS Number: 90082-41-0
EINECS Number: 290-130-6

TRF#: S787
Lot Number(s): 65212P

Suggested Use Levels: 1.0 - 5.00%
Use Level for Assay: 2.00%

Sponsor:
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Principle Investigator:
Candice Sneed

Suggested Applications:
Anti-aging, Hair and Skin Care, Antioxidant, Volumizing, Smoothing, Hydrating

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.

ACB Pisum Sativum Peptide is a product designed to increase the volume of the hair while providing hydration and antioxidant properties for protection against stressors. However this unique ingredient also enhances shine, dry and wet combability, manageability and the smoothness of the hair. The purpose of this study was to confirm whether or not **ACB Pisum Sativum Peptide** 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% **ACB Pisum Sativum Peptide** in the control shampoo. Additionally, a comparison between the control conditioner and 2.0% **ACB Pisum Sativum Peptide** 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 Pisum Sativum Peptide** is capable of enhancing wet and dry combability, anti-frizz, overall feel, shine and hydration of the hair. These attributes make it an ideal ingredient for use in products intended for all hair types.

Benefits of **ACB Pisum Sativum Peptide**:

- Anti-Aging Skin & Hair Care
- Maximizes Hair Volume
- Scalp and Follicle Health
- Increases Hydration
- Antioxidant Protection

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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 Pisum Sativum Peptide** 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 Pisum Sativum Peptide in Control Shampoo)	Assessment of the Control Conditioner	Assessment of the Experimental (2.0% ACB Pisum Sativum Peptide in Control Conditioner)
Cleansing	**6.25**	**7.25**	x	x
Smoothing	**6.14**	**8.33**	6.33	9.25
Wet Combability	**3.33**	**5.25**	6.00	9.15
Dry Combability	X	X	6.10	8.33
Anti-Frizz	X	X	5.22	8.46
Overall Feel	X	X	7.00	9.50
Shine	X	X	7.50	9.82
Hydration	X	X	8.25	9.70
Mean	**5.24**	**6.94**	**6.165**	**9.2**

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

Parameters Tested	Percent Difference – Comparison of Control Shampoo vs. Experimental (2.0% ACB Pisum Sativum Peptide in Control Conditioner Shampoo)	Percent Difference – Comparison of Control Conditioner vs. Experimental (2.0% ACB Pisum Sativum Peptide in Control Conditioner)
Cleansing	14.81%	x
Smoothing	30.26%	37.48%
Wet Combability	44.75%	41.58%
Dry Combability	x	30.90%
Anti-Frizz	x	47.36%
Overall Feel	x	30.30%
Shine	x	26.70%
Hydration	x	16.15%

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

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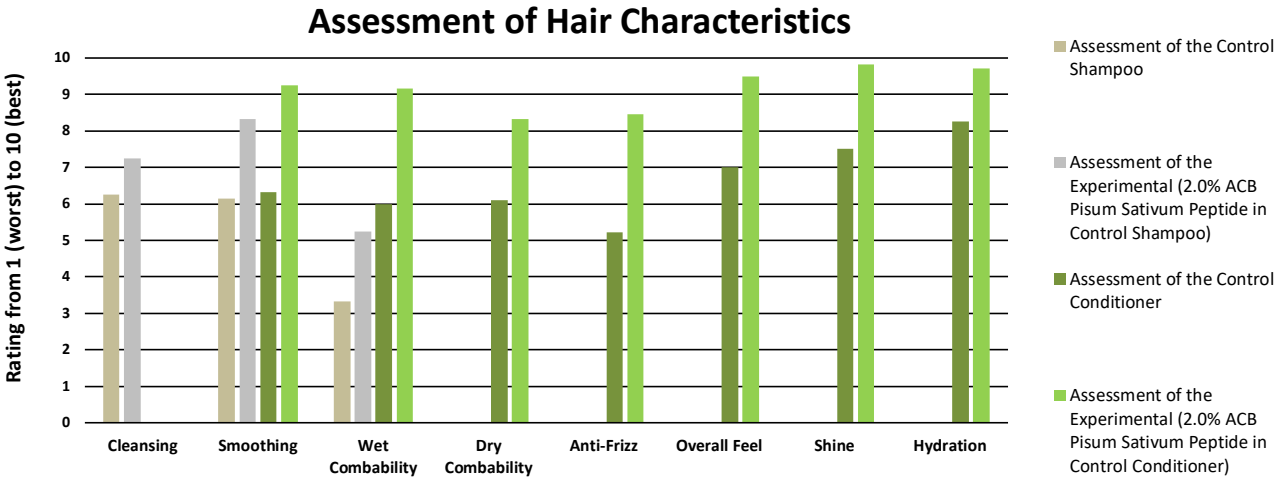

Graph 1. Rating of hair characteristics following sensory assessment.

Figure 1. Full head Baseline, Untreated Hair.

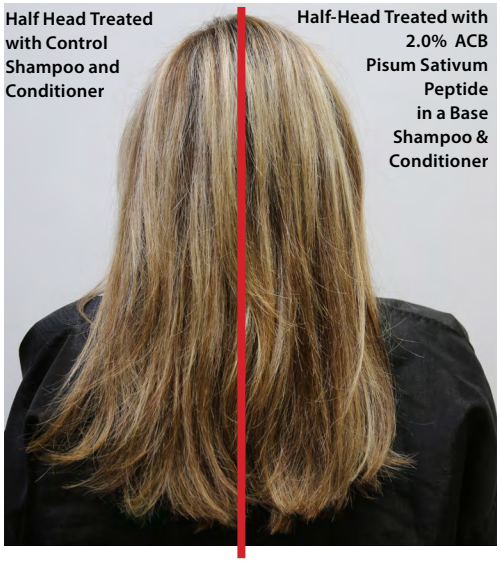

Figure 2. Half Head Treated.

Figure 3. Full head Baseline, Untreated Hair.

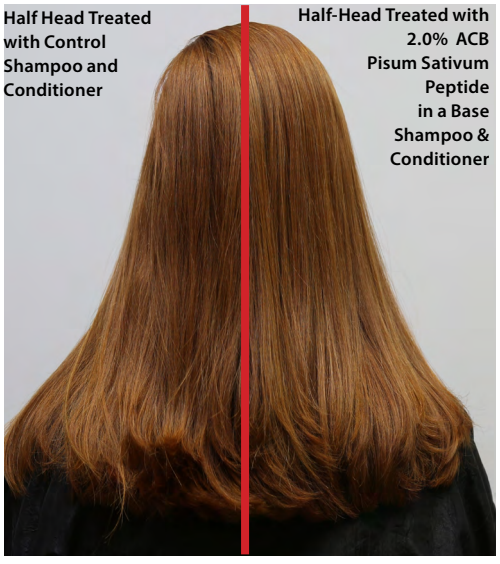

Figure 4. Half Head Treated.

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Figure 5. Full head Baseline, Untreated Hair.

Figure 6. Half Head Treated.

Figure 7. Full head Baseline, Untreated Hair.

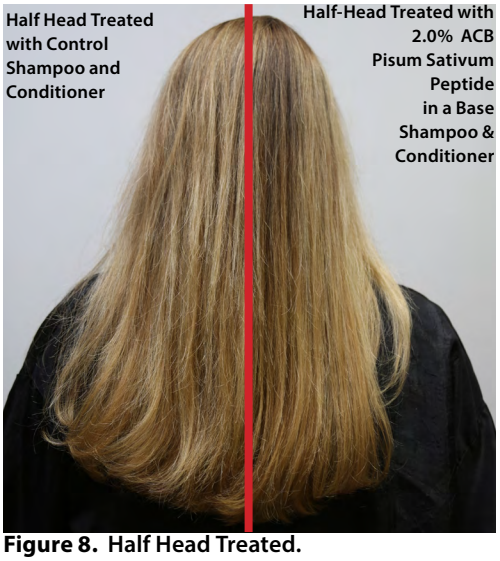

Figure 8. Half Head Treated.

Figure 9. Full head Baseline, Untreated Hair.

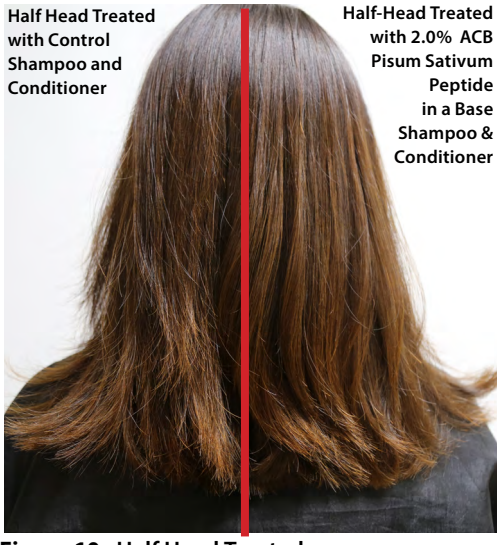

Figure 10. Half Head Treated.

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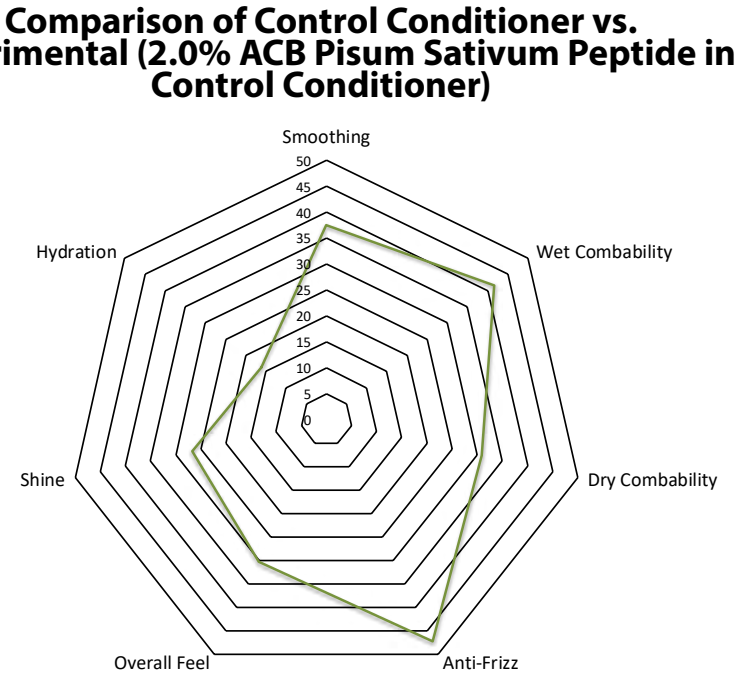
When comparing hair characteristics of the baseline assessments to the post style assessments, the benefits of including 2.0% **ACB Pisum Sativum Peptide** in a shampoo and conditioner are even more apparent. In relation to the baseline readings, the test-half of the head treated with conditioner improved the intended subjective parameters, improving smoothing, wet and dry combability, anti-frizz, overall feel, shine and hydration by 37.48%, 41.58%, 30.90%, 47.36%, 30.30%, 26.70% and 16.15%, respectively. It is clear from the images in this study that **ACB Pisum Sativum Peptide** 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 Pisum Sativum Peptide** is great for improved hydration and shine of the hair. It was also reported that this product helped enhance volume and did not weigh hair down. Perfect for use in treatments to enhance shine and hydration for healthier hair.



Graph 2. Hair Assessment results for sensory characteristics.

DISCUSSION

The results of the assessment indicate that when incorporated into a shampoo, 2.0% **ACB Pisum Sativum Peptide**did show improvement in cleansing. However, when used in a conditioner **ACB Pisum Sativum Peptide** 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 Pisum Sativum Peptide** appears healthy and silky smooth. Additionally, the subjects reported an increase in volume and overall feel of the hair.

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