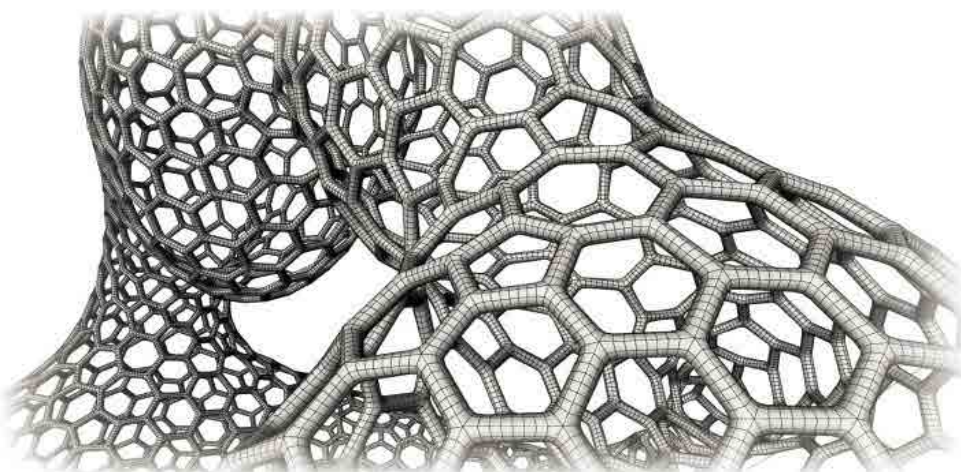


Salon Half-Head Hair Study

Patent Pending: Application Number 62/289,493



Powerful Protection
Composite Particles

natural
Hair Scaffolding Strengthening
Selective Matrix

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.

Active.Lite® Hair is a product designed to be added to hair bleach for long lasting protection and chemical 'burn' prevention. It gently lifts the hair and protects it from the harsh effects of bleach. This ingredient also enhances smoothing, wet and dry combability, anti-frizz, overall feel, shine and hydration of the hair. The purpose of this study was to confirm whether **Active.Lite® Hair** 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% **Active.Lite® Hair** in the control shampoo. Additionally, a comparison between the control conditioner and 2.0% **Active.Lite® Hair** 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, **Active.Lite® Hair** is capable of enhancing smoothing, 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: 22045

INCI Name: Polyquaternium-80 & Water & Hydrolyzed Pea Protein & Selaginella Lepidophylla Extract

INCI Status: Approved

REACH Status: Complies

CAS Number: N/A & 7732-18-5 & 222400-29-5 & 90106-73-3

EINCS Number: N/A & 231-791-2 & N/A & 290-298-0

TRF#: S37

Lot Number(s):

NC150929E & NC150029F

Suggested Use Levels: Reference Formulation Guidelines on TDS

Sponsor:

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

Study Director: Erica Segura

Principle Investigator: Meghan Darley

Suggested Applications:

Hair Protectant, Nourishing, Supportconditioning, Hydrating

Benefits of **Active.Lite® Hair**:

- Protects Hair
- Great for All Hair Types
- Provides Moisturization
- Strenthens Hair

Salon Half-Head Hair Study

Patent Pending: Application Number 62/289,493

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% **Active.Lite® Hair** 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% Active.Lite® Hair in Control Shampoo)	Assessment of the Control Conditioner	Assessment of the Experimental (2.0% Active.Lite® Hair in Control Conditioner)
Cleansing	8.00	8.00	X	X
Smoothing	5.00	5.00	5.00	8.00
Wet Combability	5.00	6.00	5.00	6.00
Dry Combability	X	X	7.00	8.00
Anti-Frizz	X	X	7.00	8.00
Overall Feel	X	X	6.00	9.00
Shine	X	X	6.00	9.00
Hydration	X	X	6.00	8.00
Mean	6.00	6.00	5.25	8.00

Chart 1. Average Results for Participant's Sensory Assessment

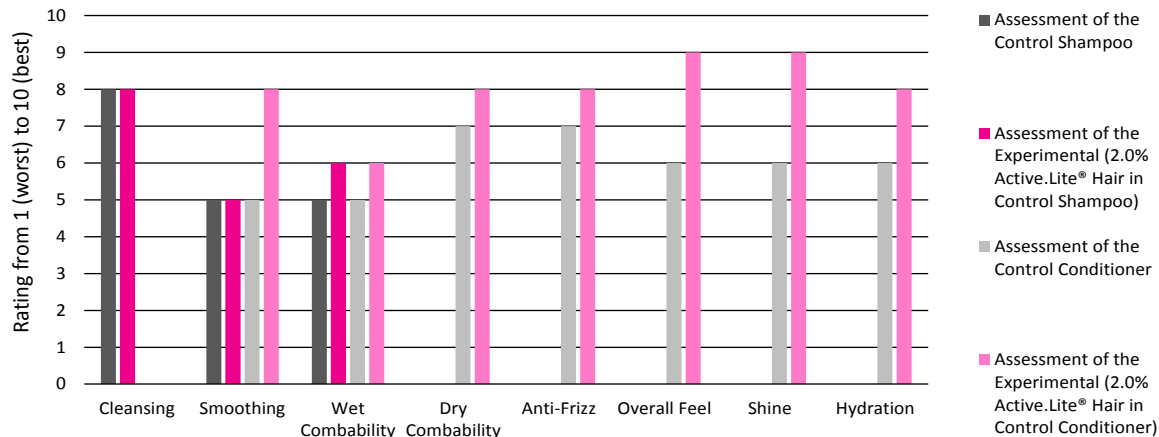
Parameters Tested	Percent Difference – Comparison of Control Shampoo vs. Experimental (2.0% Active.Lite® Hair in Control Shampoo)	Percent Difference – Comparison of Control Conditioner vs. Experimental (2.0% Active.Lite® Hair in Control Conditioner)
Cleansing	0%	X
Smoothing	0%	46%
Wet Combability	18%	18%
Dry Combability	X	13%
Anti-Frizz	X	13%
Overall Feel	X	40%
Shine	X	40%
Hydration	X	29%
Mean	18%	27%

Chart 2. Percent Difference of Participant's Sensory Assessment

Salon Half-Head Hair Study

Patent Pending: Application Number 62/289,493

Assessment of Hair Characteristics



Graph 1. Rating of hair characteristics following sensory assessment

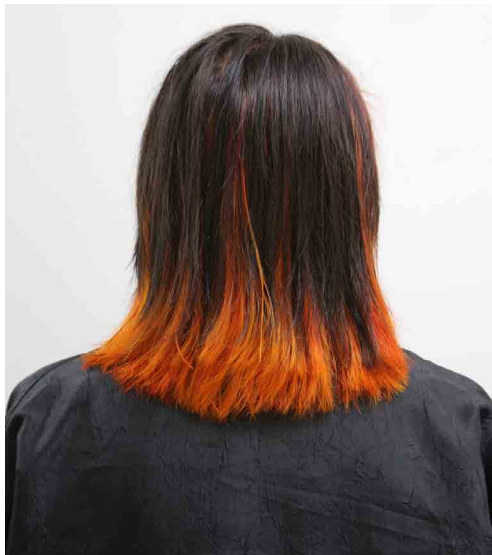


Figure 1. Full head Baseline, Untreated Hair



Figure 2. Half Head Treated



Figure 3. Full head Baseline, Untreated Hair

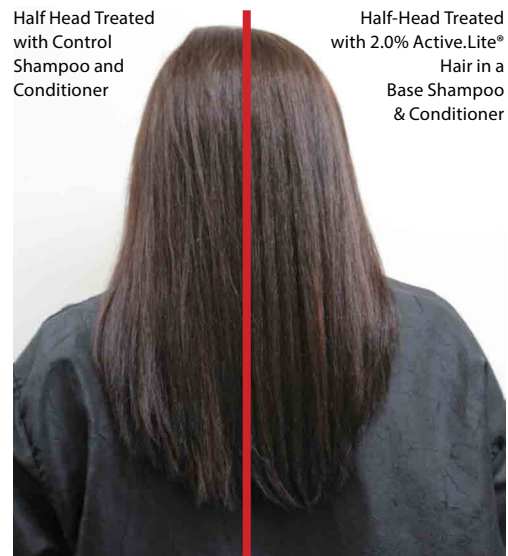


Figure 4. Half Head Treated

Salon Half-Head Hair Study

Patent Pending: Application Number 62/289,493



Figure 5. Full head Baseline, Untreated Hair

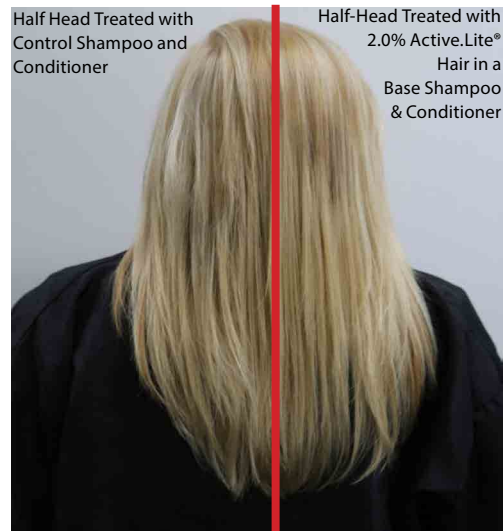


Figure 6. Half Head Treated



Figure 7. Full head Baseline, Untreated Hair

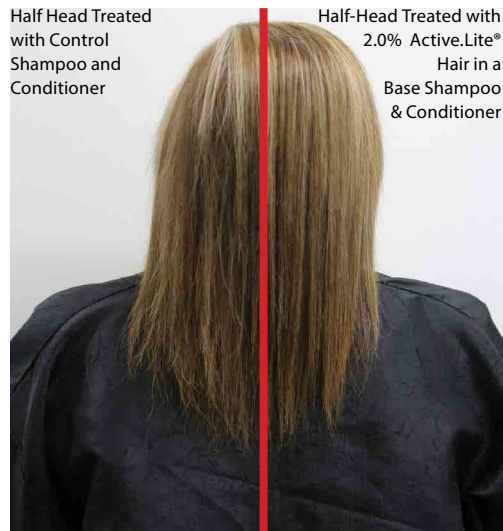


Figure 8. Half Head Treated



Figure 9. Full head Baseline, Untreated Hair



Figure 10. Half Head Treated

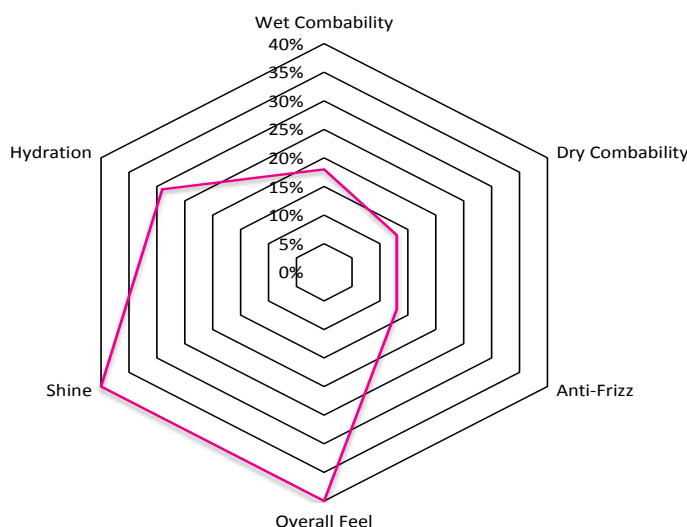
Salon Half-Head Hair Study

Patent Pending: Application Number 62/289,493

When comparing hair characteristics of the baseline assessments to the post style assessments, the benefits of including 2.0% **Active.Lite® Hair** in a conditioner are even more apparent. In relation to the baseline readings, the test-half of the head improved the intended subjective parameters of smoothness, wet and dry combability, anti-frizz, overall feel, shine and hydration by 46%, 18%, 13%, 13%, 40%, 40% and 29%, respectively. It is clear from the images in this study that **Active.Lite® Hair** helps create a smooth, sleek hairstyle. Additionally, in all images, the hair is noticeably shinier, with less frizz and has a healthy appearance.

The professional stylist who performed the actual tests by applying the product, styling the hair and documenting the images said **Active.Lite® Hair** is great for use on any hair type. This product works well at reducing frizziness and smoothing of the hair. This product enhances the sleekness, combability, the overall feel and look of the hair. Recommended for consumers with ethnic or coarse hair to achieve a silky, less frizzy style. **Active.Lite® Hair** is good for use in a pre-treatment or after chemical treatment product. This product also has the ability to recondition the hair after bleaching, providing a smooth and healthy 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% **Active.Lite® Hair** did show improvement in wet combability. However, when used in a conditioner **Active.Lite® Hair** 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% **Active.Lite® Hair** appears sleek, smooth and less frizzy. Additionally, the subjects reported a significant increase in smoothness, combability and overall feel of the hair, especially after chemical treatment.