



Botanical Skin + Hair Care Exfoliate antimicrobial Sustainability Water Soluble Natural Anti-irritant Natural Anti-irritant

## **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.

**ABS Willow Bark Extract** is a product designed to provide exfoliation and antimicrobial benefits, while improving problem skin. However, this unique ingredient also can be used for smoothing, improving wet and dry combability, anti-frizz, overall feel, shine and hydration when used in hair care products. The purpose of this study was to confirm whether **ABS Willow Bark Extract** is capable of providing benefits when included in a shampoo and conditioner used on ethnic hair types.

A half head study was conducted to determine the comparison of a control shampoo vs. 2.0% **ABS Willow Bark Extract** in the control shampoo. Additionally, a comparison between the control conditioner and 2.0% **ABS Willow Bark Extract** 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, **ABS Willow Bark Extract** is capable of enhancing 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.

Code Number: 10200

**INCI Name**: Salix Nigra (Willow) Bark

Extract

INCI Status: Approved REACH Status: Complies CAS Number: 84650-64-6 EINCS Number: 283-522-3

TRF#: S41 Lot Number(s):

#NC151103-I, #NC15030-K

Suggested Use Levels: 2.0 - 5.0%

**Use Level for Assay**: 2.0%

**Sponsor:** 

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Study Director: Erica Segura
Principle Investigator: Maureen

Danaher

**Suggested Applications:** 

Antimicrobial, Problem Skin, Exfoliating

### Benefits of ABS Willow Bark Extract:

- Exfoliation
- Moisturization
- · Natural Antimicrobial Activity
- Problem Skin

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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% **ABS Willow Bark Extract** 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% ABS Willow Bark Extract in Control Shampoo)	Assessment of the Control Conditioner	Assessment of the Experimental (2.0% ABS Willow Bark Extract in Control Conditioner)
Cleansing	6.00	6.00	X	X
Smoothing	6.00	6.00	5.00	7.00
Wet Combability	5.00	6.00	6.00	7.00
Dry Combability	X	X	5.00	7.00
Anti-Frizz	X	X	5.00	7.00
Overall Feel	X	X	5.00	8.00
Shine	Х	X	5.00	7.00
Hydration	X	X	6.00	7.00
Mean	5.66	6.00	5.29	7.14

Chart 1. Average Results for Participant's Sensory Assessment

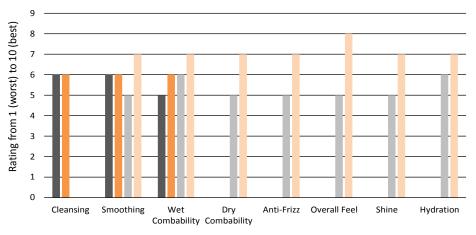
Parameters Tested	Percent Difference – Comparison of Control Shampoo vs. Experimental (2.0% ABS Willow Bark Extract in Control Shampoo)	Percent Difference – Comparison of Control Conditioner vs. Experimental (2.0% ABS Willow Bark Extract in Control Conditioner)
Cleansing	0%	X
Smoothing	0%	33%
Wet Combability	18%	15%
Dry Combability	X	33%
Anti-Frizz	X	33%
Overall Feel	X	46%
Shine	X	33%
Hydration	X	15%
Mean	18%	30%

Chart 2. Percent Difference of Participant's Sencory Assessment

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## **Assessment of Hair Characteristics**



■ Assessment of the Control Shampoo

- Assessment of the Experimental (2.0% ABS Willow Bark Extract in Control Shampoo)
- Assessment of the Control Conditioner
- Assessment of the Experimental (2.0% ABS Willow Bark Extract in Control Conditioner)

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 7. Full head Baseline, Untreated Hair



Figure 9. Full head Baseline, Untreated Hair



Figure 6. Half Head Treated



Figure 8. Half Head Treated

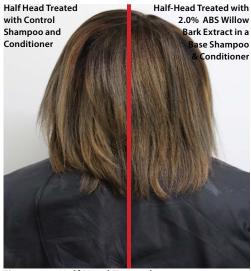


Figure 10. Half Head Treated

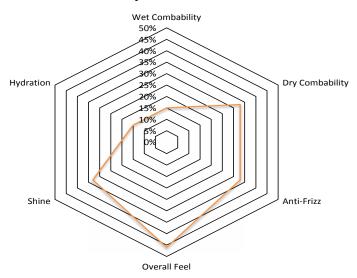
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In relation to the baseline readings, the test-half of the head improved smoothing, wet and dry comability, anti-frizz, overall feel, shine and hydration by 33%, 15%, 33%, 33%, 46%, 33% and 15%, respectively. It is clear from the images in this study that **ABS Willow Bark Extract** helps create a smooth hairstyle. Additionally, in all images, the hair is noticeably shinier and has a healthier appearance.

The professional stylist who performed the actual tests by applying the product, styling the hair and documenting the images said **ABS Willow Bark Extract** is great for over processed and coarse hair to provide a smooth, improved overall feel of the hair. As you can see from the pictures, the product did enhance the appearance of styled hair. Perfect for use in products to smooth and increase vibrancy of the hair.

## Comparison of Control Conditioner vs. Experimental



Graph 2. Hair Assessment results for sensory characteristics

## **DISCUSSION**

The results of the assessment indicate that when used in a conditioner **ABS Willow Bark Extract** is capable of improving smoothing 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% **ABS Willow Bark Extract** appears healthy, shiny and smooth. Additionally, the subjects reported a significant increase in smoothness and overall feel of the hair.



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