Hirox 3D Imaging

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Tradename: ProCutiGen® Hold

Code: 20831

CAS #: 999999-99-4 & 1686112-10-6 (or) 9015-54-7

Test Request Form #: 3152

Lot #: NC170117-M

Test Performed:
Hirox 3D Imaging

Background

Everyday stressors come in all forms whether environmental, chemical, or thermal. Rather than focusing on repairing broken bonds that occur during physical and chemical stress, **ProCutiGen® Hold** consists of bivalent cationic peptides that create a *de novo* cuticle on the hair to prevent damage from happening in the first place.

This study was conducted to determine if **ProCutiGen® Hold** is capable of modifying hair shape while protecting it from styling damage.

Methods & Materials

This study was conducted by salon professionals using Sensationnel Bare & Natural Brazilian 100% Virgin Remi Unprocessed Human Hair (Hair Zone Moonachie, NJ). One swatch, left unaltered, was analyzed as the control. Two test swatches were treated and submitted for testing. One swatch was treated, spritzed with water, allowed to dry, curled holding for 10 seconds and released. The other test swatch was treated, spritzed with a 2.0% **ProCutiGen® Hold** solution and water, allowed to dry, curled holding for 10 seconds and released. The swatch treatment was designed to mimic everyday effects of curling the hair. It is important to note not additives or fixatives were used in the test solution. This was done intentionally in order to visually see clear results.

Manufacturing Solutions Center (MSC) located in Conover, North Carolina was asked to perform Hirox 3D Imaging on the five hair swatches provided by Active Concepts, LLC. MSC utilized a KH-7700 Hirox 3D Imaging Microscope to perform the test. The lens used was MX(G)-5040Z with magnification ranging from 50x-300x.

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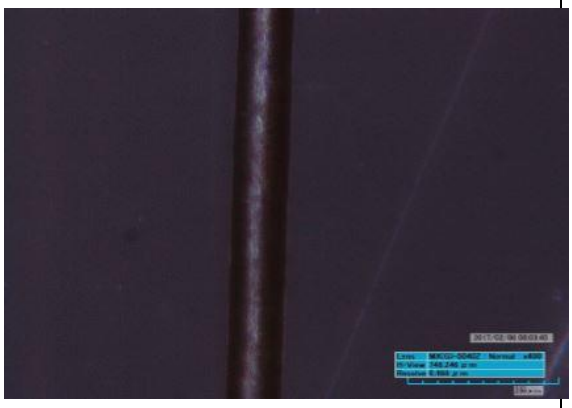
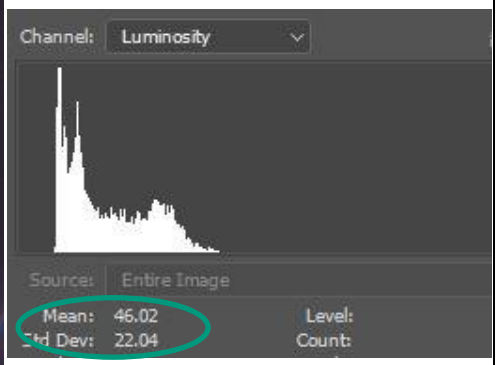
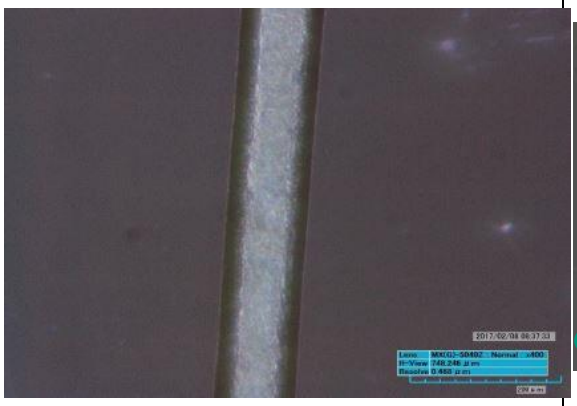
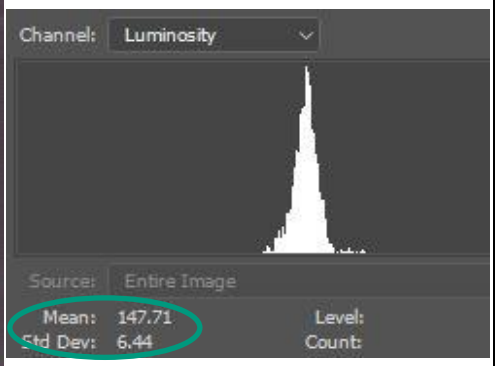
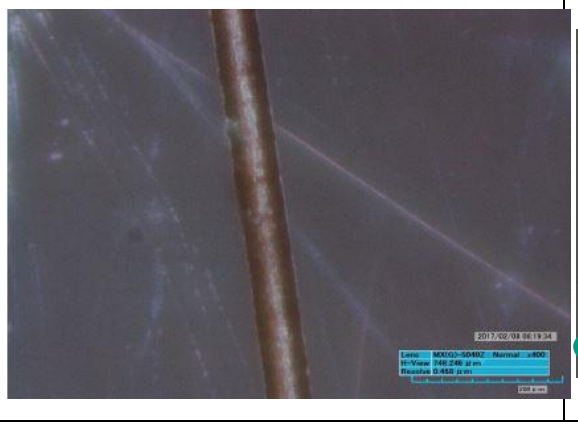
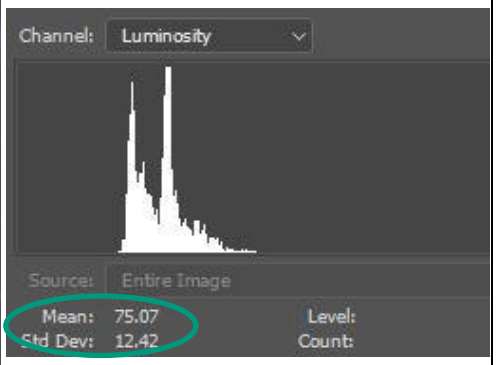
Results

Swatch Description	HIROX Image	Histogram Quantification
Untreated Virgin Hair		
Water Treated & Curled		
Water + **20831 ProCutiGen® Hold** & Curled		

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Discussion

Hirox 3D Microscopic Examination is a test method for microscopic examination of hair samples. Damage of the hair fiber can be seen within these images in which the damaged areas of the fiber fluoresce. The more fluorescence a fiber exhibits, the more damaged. Within the images above significant less damage can be viewed on both the Untreated Virgin swatch and **ProCutiGen® Hold** treated swatch. Whereas the water treated swatch exhibits significantly more damage visually. In addition to the visual evidence, the photos were quantified via histograms based on luminescence. The values denoted clearly depict the ability of **ProCutiGen® Hold** to protect the hair fiber reducing overall damage to the fiber. **ProCutiGen® Hold** consists of bivalent cationic peptides that create a *de novo* cuticle on the hair to prevent damage from happening in the first place.