



Hair Hydration Comparison Assay

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Tradename: ACB Quinoa Protein

Code: 20037

Lot #: 68095P

CAS #: 100209-45-8

Test Request Form #: S7

Sponsor: Active Concepts, LLC; 107 Technology Drive Lincolnton, NC 28092

Study Director: Maureen Danaher

Principle Investigator: Parisa Mehrzadeh

Test Performed:

Gravimetric Analysis of Hair Hydration

Introduction

The study was conducted to evaluate the hair hydration benefits of **ACB Quinoa Protein** by gravimetric means.

Materials

- A. Equipment: Sealed glass chamber, Relative humidity monitor, Analytical balance (Mettler Toledo Model ME4002E). This study was conducted using Sensationnel Bare & Natural Brazilian 100% Virgin Remi Unprocessed Human Hair (Hair Zone Moonachie, NJ).

Methods

Gravimetric analysis is an analytical method in which the analytical signal is a measurement of mass or a change in mass. Substantivity of a material can be measured as a change in mass after the material is exposed to controlled humidity. An increase in hydration can be measured by comparing the weight of the test material at over time after application and signifies hydrating capabilities.

Before measuring the moisturizing effect, the hair swatches were kept in a humidity controlled box (22°C, 50% Relative Humidity) for 24 hours. Hair swatches were weighed on an analytical balance and their starting weight was recorded. The hair swatches were immersed in either 2.0% ACB Quinoa Protein aqueous solution, 2.0% Wheat Hydrolysate aqueous solution (positive control) or left untreated (negative control). The treated swatches were immersed in their respective solutions for three hours at 22°C and then rinsed with deionized water. The hair swatches were air dried in the humidity controlled box (22°C, 50% Relative Humidity) for 48 hours. The swatches were then weighed and with the analytical balance for final measurement.

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Results

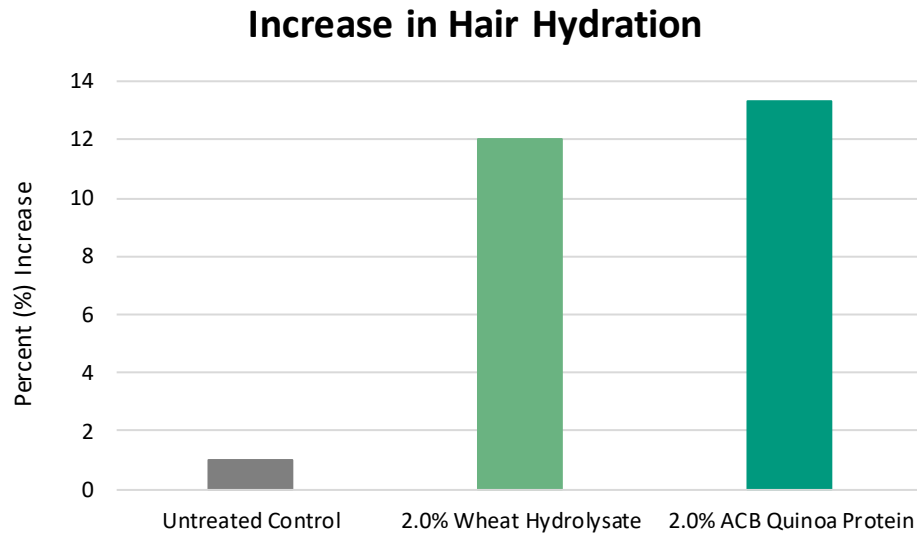


Figure 1. Average Percent Increase in Hydration.

Discussion

The naturally rich amino acid content of quinoa utilized in the production of **ACB Quinoa Protein** offers a protein hydrolysate capable of producing hair-hydrating benefits. **ACB Quinoa Protein** increases hair hydration by 11.0% more than wheat hydrolysate and 92.6% more than the untreated control.