Effect of a peptide in cosmetic formulations for hair humidity-control

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Abstract

Humidity affects hair by changing the surface texture of the fiber. In higher humidity conditions, it is verified an increase of water uptake, which causes the swelling of the hair fibers. This leads to the extension of the hair cuticles and consequent increased friction between fibers, which causes static and an increase in the volume of hair tresses. However, these changes are distinct in different types of ethnic hair, where Caucasian Brown hair evidences a higher increase in hair tresses volume. We tested the application of several climate control formulations with and without a keratin-based peptide. The hair tresses treated with the formulations containing the peptide showed reduced volume change even after several hours of high humidity conditions. Due to its chemical nature, the peptide has affinity towards the hair fiber providing long-lasting moisture resistance and allowing it application in climate control formulations.