



HAIR DISORDERS

## EFFECTS OF COSMETIC PRODUCTS ON HAIR RESISTANCE AND STRUCTURE

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**Objective:** The aim of this study was to evaluate the effects of two cosmetic products ( MONAT Renew Shampoo and Restore Leave-in Conditioner) on resistance of the hair to mechanical forces (tensile strength, combing) and hair structure under scanning electron microscope (SEM) .

**Materials and Methods:** Tests were performed at Kosmoscience (Brazil) laboratories on normal virgin hair as well as on hair that had previously been damaged from chemical procedures (e.g. dyeing, bleaching).

Wet combability and tensile strength were tested using the EMIC DL-500 test equipped with a dynamometer . SEM analysis of hair structure was analyzed using the Scion® for Windows software program. This detects damage to the hair fiber surface (e.g. raised cuticles, fragments) as lighter colored areas.

**Results:** The results of the tensile tests show that the tested hair products improved hair combability and did not reduce the mechanical resistance of hair. In particular they did not cause hair breakage or loss of hair flexibility even when utilized on bleached damaged hair . SEM analysis showed that the tested products did not change the superficial structure of normal virgin hair, including those treated with flat iron and in fact improved the superficial structure of damaged bleached/dyed hair.

**Conclusions:** Preventing and reversing hair weathering is an essential step in preventing hair breakage. Our results show that the MONAT shampoo and conditioner can improve the structure of damaged hair .

