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HAIR DISORDERS

## USE OF A LEAVE-ON PRODUCT FOR REDUCED HAIR VOLUME DUE TO AGEING: RESULTS OF IN VIVO AND EX VIVO STUDIES.

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Introduction: Chronological hair ageing shows clinical signs of greying, reduced volume, and weaker mechanical properties. A leave-on hair and scalp product (RV4739A) containing Ginseng and Prodizia extracts was developed for thickening and densifying hair.

Objectives: Assess the effect of this product on hair from subjects with clinical signs of hair ageing.

Materials & Methods: In vivo study: 29 menopausal women (55-75 yrs) with thinner, less dense, fragile hair compared to that of their youth. Product applied to scalp 3 times/week for 12 weeks. Hair mass index (HMI-Haircheck®), global hair 'volume' (surface area from photos) and self-assessment of hair quality were measured before and after 1 application, then at 6 & 12 weeks.

Ex vivo study: HMI measurements made on dry, damaged hair tresses, after 1, 3 product applications unrinsed, then up to 36 times with washing every 3 applications, simulating 12 weeks of use. A water only control was included.

Results: In vivo, a general improvement in hair volume was seen with significant increases in: HMI (each time point), global hair 'volume' (12 weeks), and self-assessed hair quality (6 weeks improving at 12 weeks). Negative hair quality items decreased significantly, confirming quantitative results.

Ex vivo, HMI increased significantly after 1 and 3 applications of RV4739A unrinsed, and was greater than the water control. After 12 & 36 applications with rinsing, this was similar to baseline, but greater than the water control which decreased over time. This demonstrates the thickening effect of the leave-on product, and a 'protective' effect compared to the water control.

Conclusion: The results showed, ex vivo, a physical thickening effect of the product on the fiber when not rinsed, and in vivo, a biological effect after 6, 12 weeks. These combined effects help compensate hair ageing effects particularly loss of volume.





