

Title: Clinical efficacy of a topical serum containing 15% L-Ascorbic Acid, Neohesperidin, Pycnogenol, tocopherol and Hyaluronic Acid on the skin aging signs.

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Background: Skin Aging is a process linked to chronological aging and exposome such as chronic UV exposure and pollution which both induce, among other effects, reactive oxygen species. Therefore, topical formulations which have strong antioxidant effects could counteract this process. The current formulation combines strong antioxidant ingredients such as 15% of L-Ascorbic Acid, Neohesperidin, Pycnogenol, tocopherol with fragmented Hyaluronic Acid to improve the extracellular matrix.

Objective: Evaluating the efficacy of a topical potent antioxidant serum containing 15% L-Ascorbic Acid, Neohesperidin, Pycnogenol, tocopherol and Hyaluronic Acid in skin ageing signs of Brazilian subjects with clinical, instrumental and skin imaging assessment techniques.

Material and Method: 40 female subjects 40 to 65 years old, with phototype II to IV, presenting wrinkles (frontal, glabellar and nasolabial folds) score ≥ 2 to 5 (from Skin Aging Atlas), and facial dark spots (excluding ephelides and melasma) and/or lentigo were included in the study. All of them were evaluated for clinical efficacy and safety. 20 of them underwent instrumental (Primos, Visia CR, Cutometer, Chroma Meter) and 16 skin imaging (Confocal). The evaluations were performed after 45 and 90 days of product use. The confidence interval considered in the comparative analysis between time-points was 95%.

Results: A statistically significant improvement on skin ageing signs were observed at day 90: frontal, nasolabial and glabellar wrinkles improved by 23.9%, 22.7% and 19.1%. Similar results were observed for skin tone homogeneity, dark spots color intensity and hyperpigmentation which were confirmed by VISIA. Instrumental measures at day 90 demonstrated improvements of skin texture, depth and volume of wrinkles; skin firmness and elasticity; skin homogeneity; in thickness of the epidermis and of the stratum corneum; and the morphology of the dermis and stratum corneum. No adverse events were observed.

Conclusion: The topical potent antioxidant serum containing 15% L-Ascorbic Acid, Neohesperidin, Pycnogenol, tocopherol and Hyaluronic Acid demonstrated a clinically relevant efficacy on skin ageing conditions, with a good safety profile after 90 days of daily use.