



AESTHETIC AND COSMETIC DERMATOLOGY (LASERS SEPARATE CATEGORY)

EVALUATION OF THE PENETRATION AND CLINICAL EFFICACY OF A FACIAL FORMULA CONTAINING VITAMIN C AND ASCORBYL GLUCOSIDE ON WOMEN WITH MILD TO MODERATE PHOTO-DAMAGED FACIAL SKIN

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Introduction: Vitamin C has been recognized to play a vital role in skin health. A commonly mentioned disadvantage of vitamin C is the low penetration in skin due to its low lipophilic behavior and high instability. Nonetheless, with proper formulation, stability and penetration of vitamin C can be improved to better delivery its benefits. The present analytical work was performed to assess the penetration of vitamin C in skin of a novel anhydrous formula containing 10.5% of L-ascorbic acid and 2% ascorbyl glucoside. Further, the clinical efficacy of the novel formula was evaluated.

Method: Ten (10) D-SQUAME® samples were sequentially collected from a panel of 21 subjects at baseline, hour 2, day 7, 4 and 6 days after discontinuation of application and analyzed by LC-MS/MS. Further, an 8-week, single-center, double-blinded, randomized, clinical study was conducted on 104 subjects presented with mild to moderate severity of aging signs. The subject population was randomized into two cells using either the novel or the previous formula. Clinical evaluations were conducted at baseline, immediate, weeks 2, 4, 8 with twice daily use. Subjects tested the novel formula also completed self-assessment questionnaires. Clinical images were taken and analyzed for crow's feet area wrinkle parameters.

Results: The analytical results showed statistical significant amount of vitamin C recovered starting with the first application. Penetration was observed with repeated applications. The results from the clinical study indicated that the novel formula showed significant improvement in aging signs when compared to baseline. When compared between treatments, a statistical significant difference in favor of the novel formula for firmness at week 2, skin texture at week 4, and wrinkle reduction starting at week 2 and continued to week 8. Image analysis showed improvement in crow's feet wrinkles at all time points assessed for the novel formula.

