

A Comparison of Stratum Corneum Moisture Barrier, Visual and Hydration Skin Improvements with a Niacinamide Containing Moisturizer and a High Mineral Oil Containing Moisturizer

Jeremy C. Christman, M.S., Debbie Watson, B.S., Sawanna Lucus, B.S., Rolanda J. Johnson, Ph.D.
The Procter & Gamble Company, Cincinnati, Ohio USA

INTRODUCTION

Despite the numerous body lotions available cosmetic xerosis (dry skin) continues to be a leading skin problem for consumers many technologies provide cosmetic benefits without addressing the underlying causes of xerotic skin. After evaluation of a 35 day clinical study, a Niacinamide containing moisturizer was demonstrated to provide a better solution towards rapid and prolonged improvement of cosmetic xerosis due to its functional improvement of stratum corneum barrier function.

OBJECTIVE

To determine the visual and hydration effects of two leave on cosmetic moisturizer products with varied active ingredients during and after 21 days of treatment. A second objective included determining the effect of these products on the barrier function of the skin as well as the resistance of the skin to barrier damage.

METHODS

Two 35-day, randomized, untreated-controlled, 9 test leg (including a not treatment) clinical studies were performed on approximately 63 subjects each. Each study consists of 3 phases: pre-treatment, treatment, and regression. During the 7-day pre-treatment phase, subjects pre-conditioned their skin by using Olay® (manufacturer) bar soap in place of their usual products for bathing and showering. After pre-treatment, subjects returned to the test facility to have the skin on their lower legs evaluated by an expert grader. Treatments were applied in a control setting by a clinical test manager. The 2 products (major ingredient[s] listed) reported here included: 1) Niacinamide/Glycerin formula and 2) Heavy Mineral Oil formula. Following completion of the treatment phase, subjects began a 6-day regression phase in which evaluations and procedures were performed on each site to assess product effectiveness and barrier integrity resulting from the application of the test products. During the regression phase, no test products were applied to the sites. To assess product effectiveness, we performed visual dryness, skin hydration, and skin (ie, stratum corneum) barrier integrity on each treatment site at during the regression (post-treatment) phase.

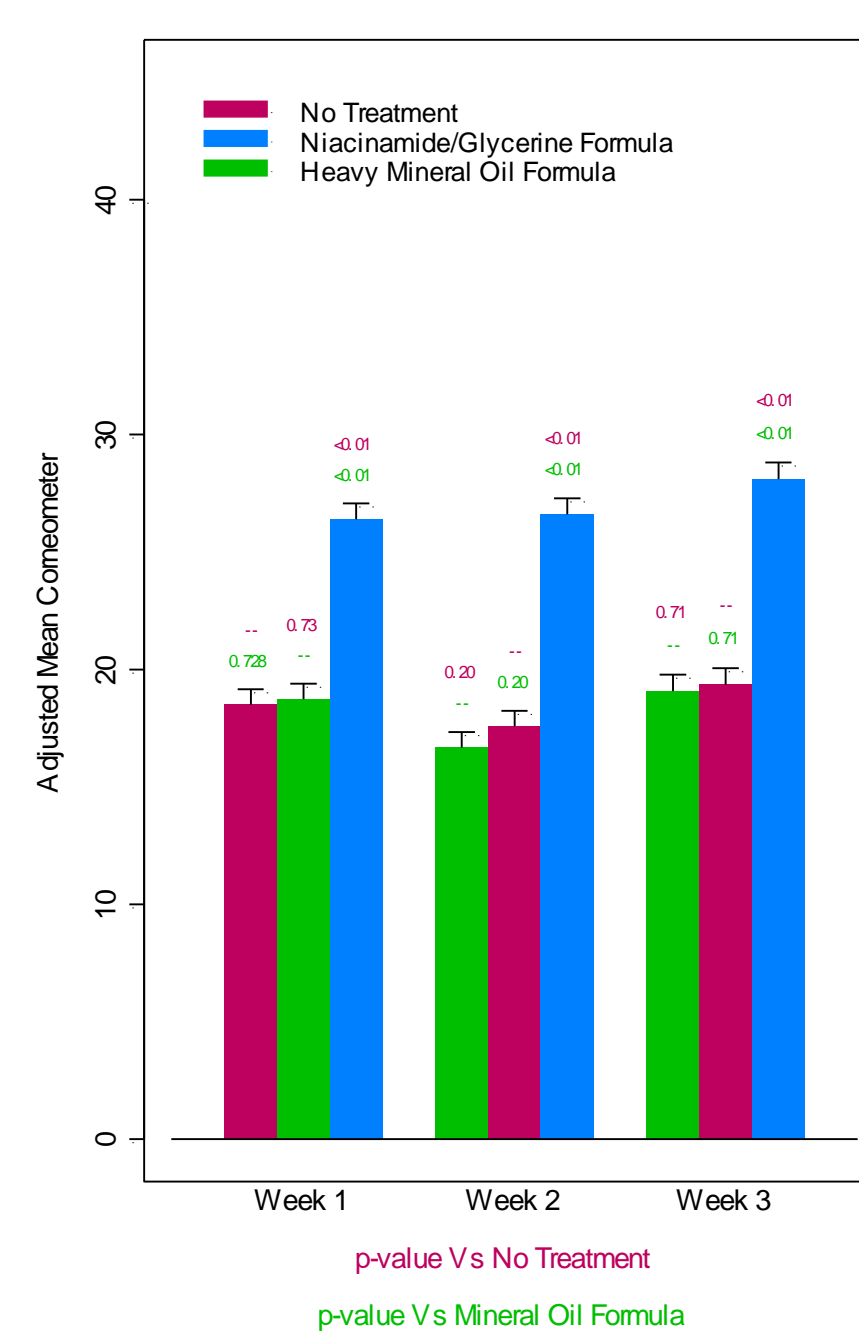
RESULTS

Niacinamide/Glycerin cosmetic formula clinically proven to improve stratum corneum barrier integrity

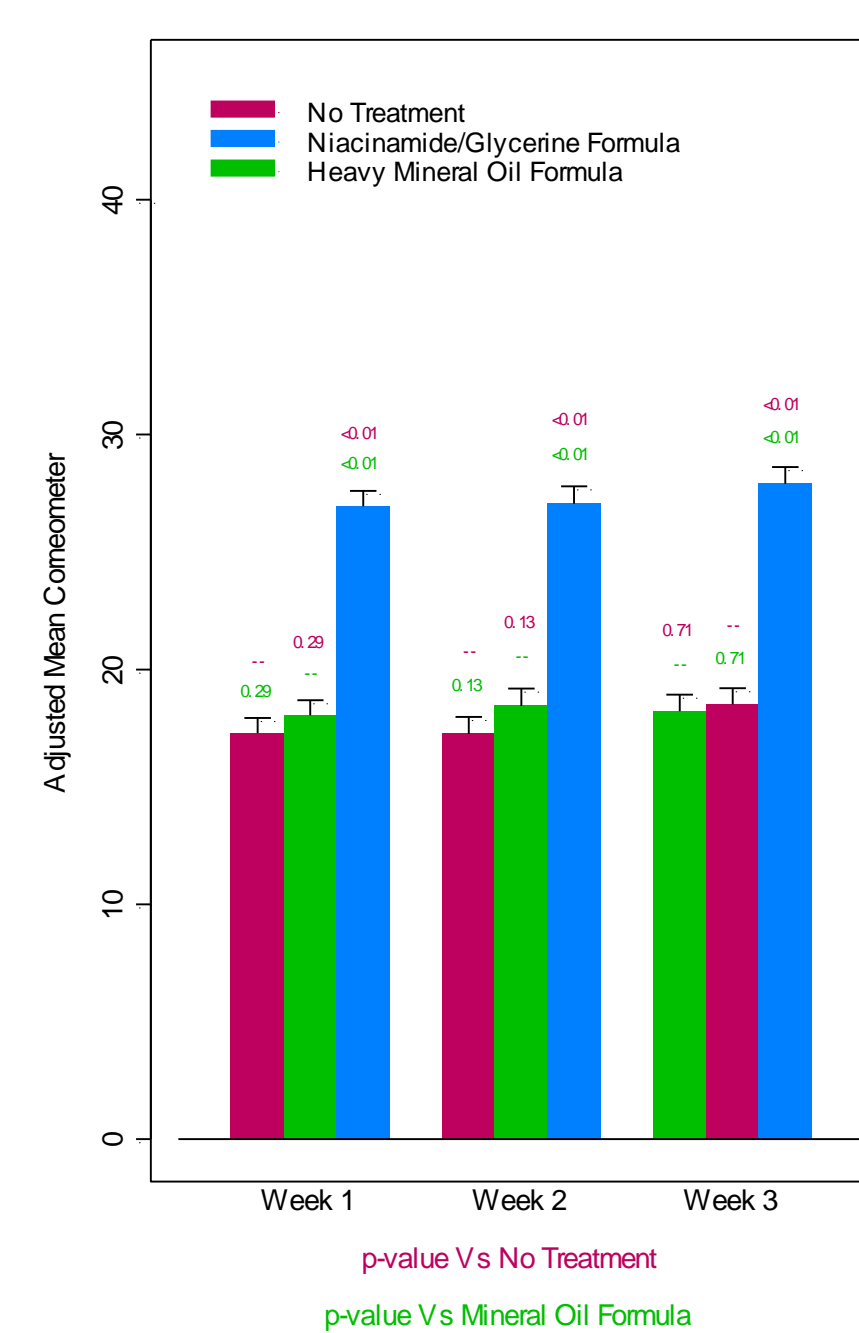
Two clinical studies were consistent in demonstrating a Niacinamide/Glycerin cosmetic moisturizer has significant advantages vs. a heavy mineral oil moisturizers in two key areas, improving skin barrier over time and rapidly hydrating skin.

With continued use after 21 days, the Niacinamide/Glycerin moisturizer improves transepidermal water loss (skin barrier) versus a the Heavy Mineral Oil formulation. It also has clinically proven superiority versus the Heavy Mineral Oil cosmetic moisturizer at 120 hours after product usage. With twice daily application, after 7 days of use, the Niacinamide/Glycerin formula increases skin hydration more rapidly than the Heavy Mineral Oil based moisturizer.

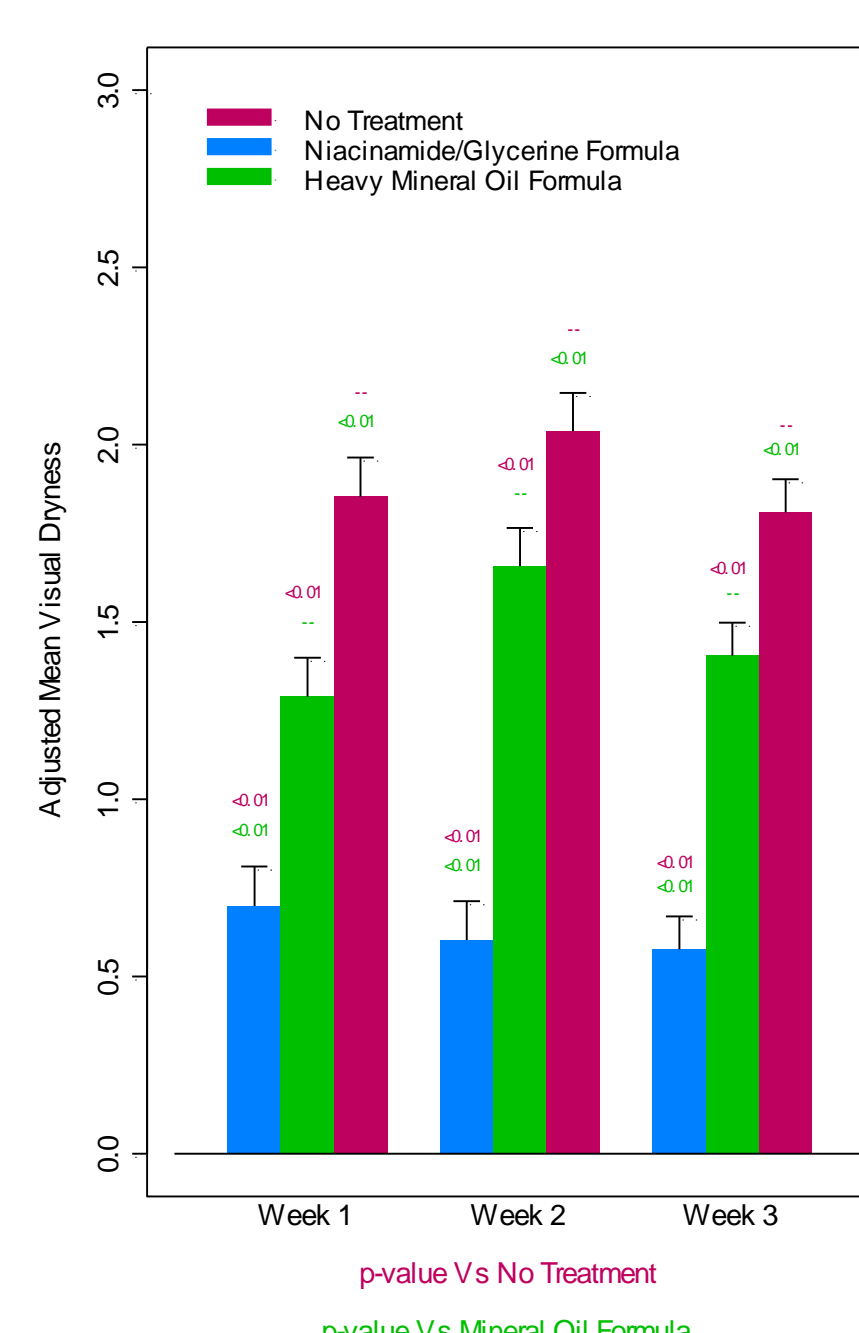
Study 1 Corneometer



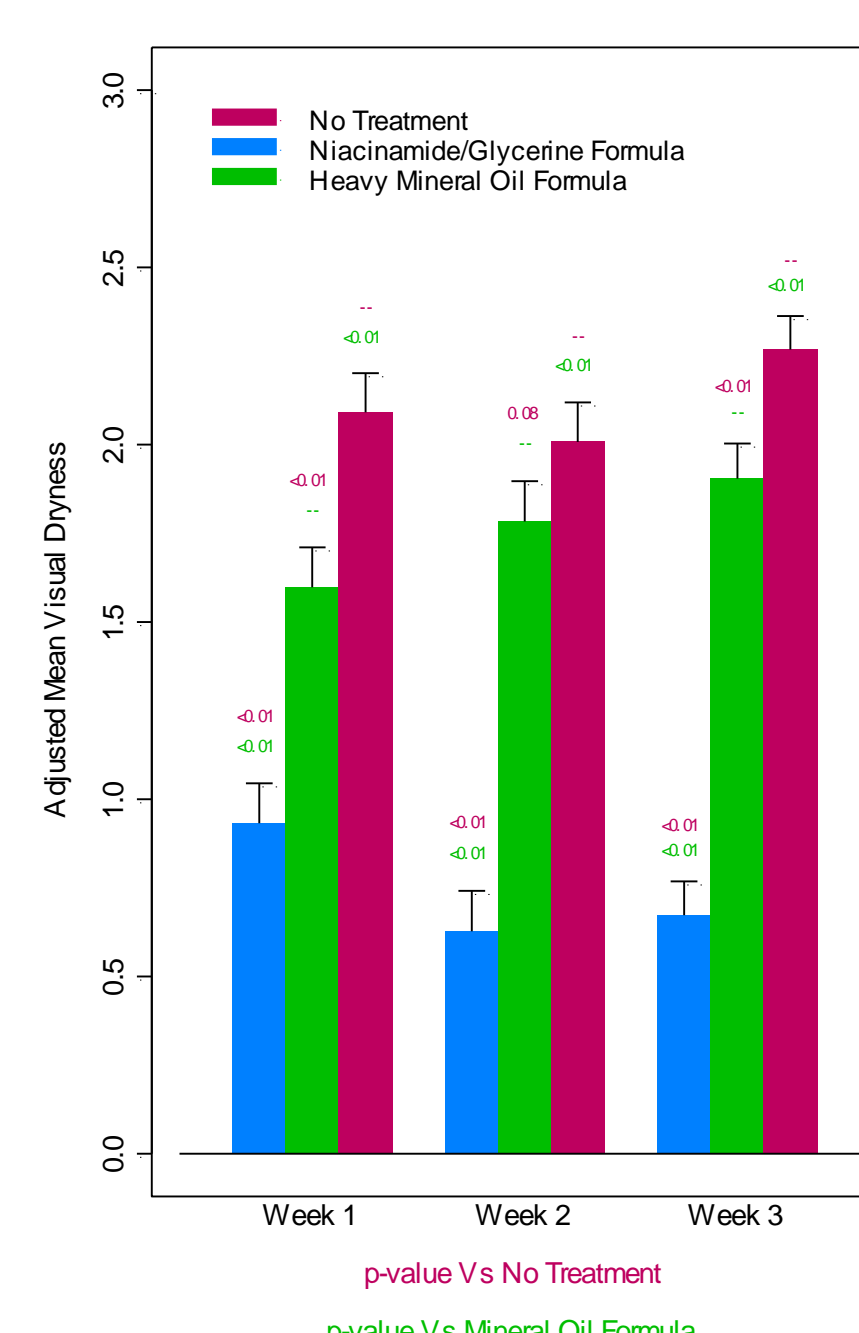
Study 2 Corneometer



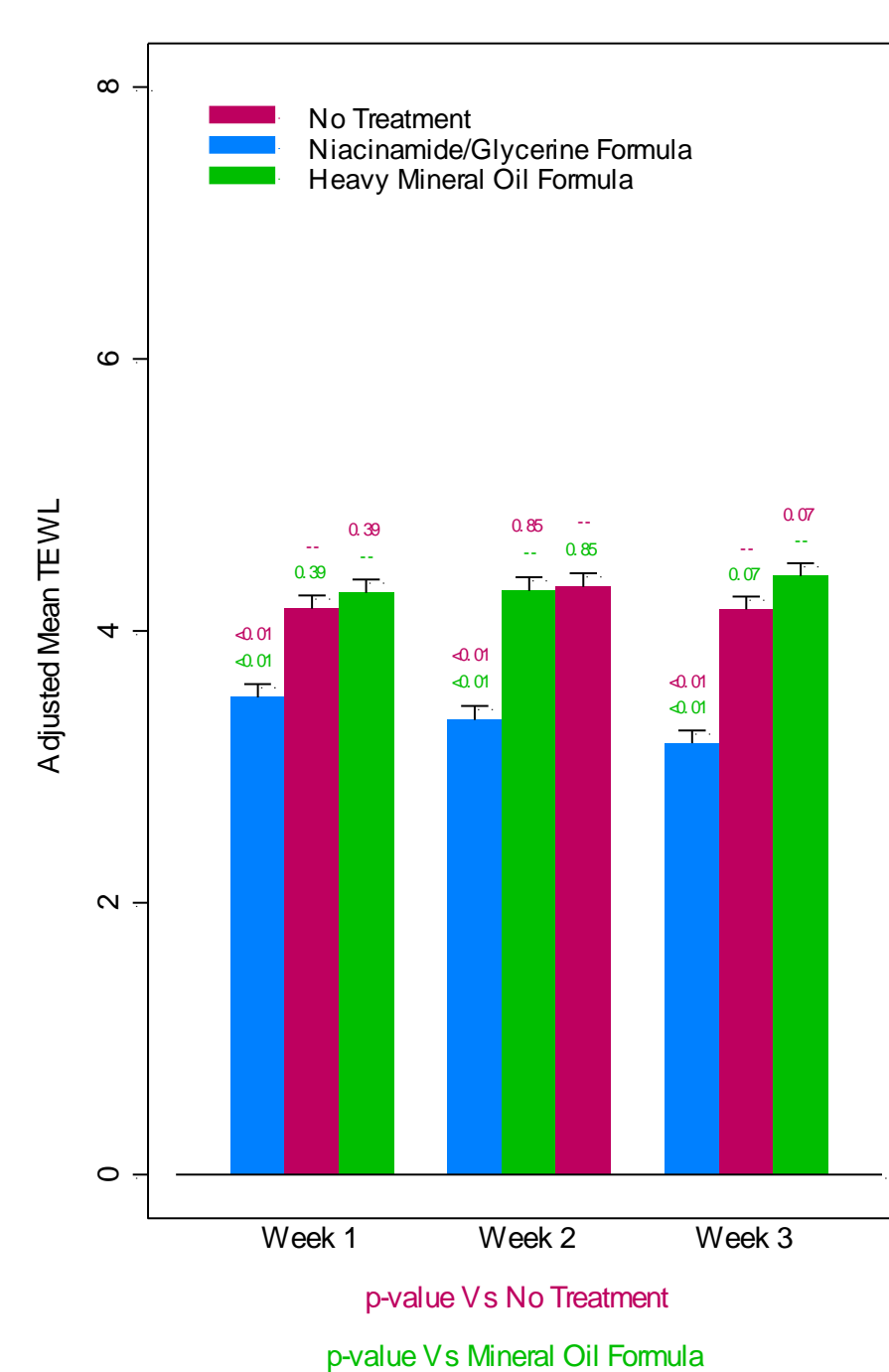
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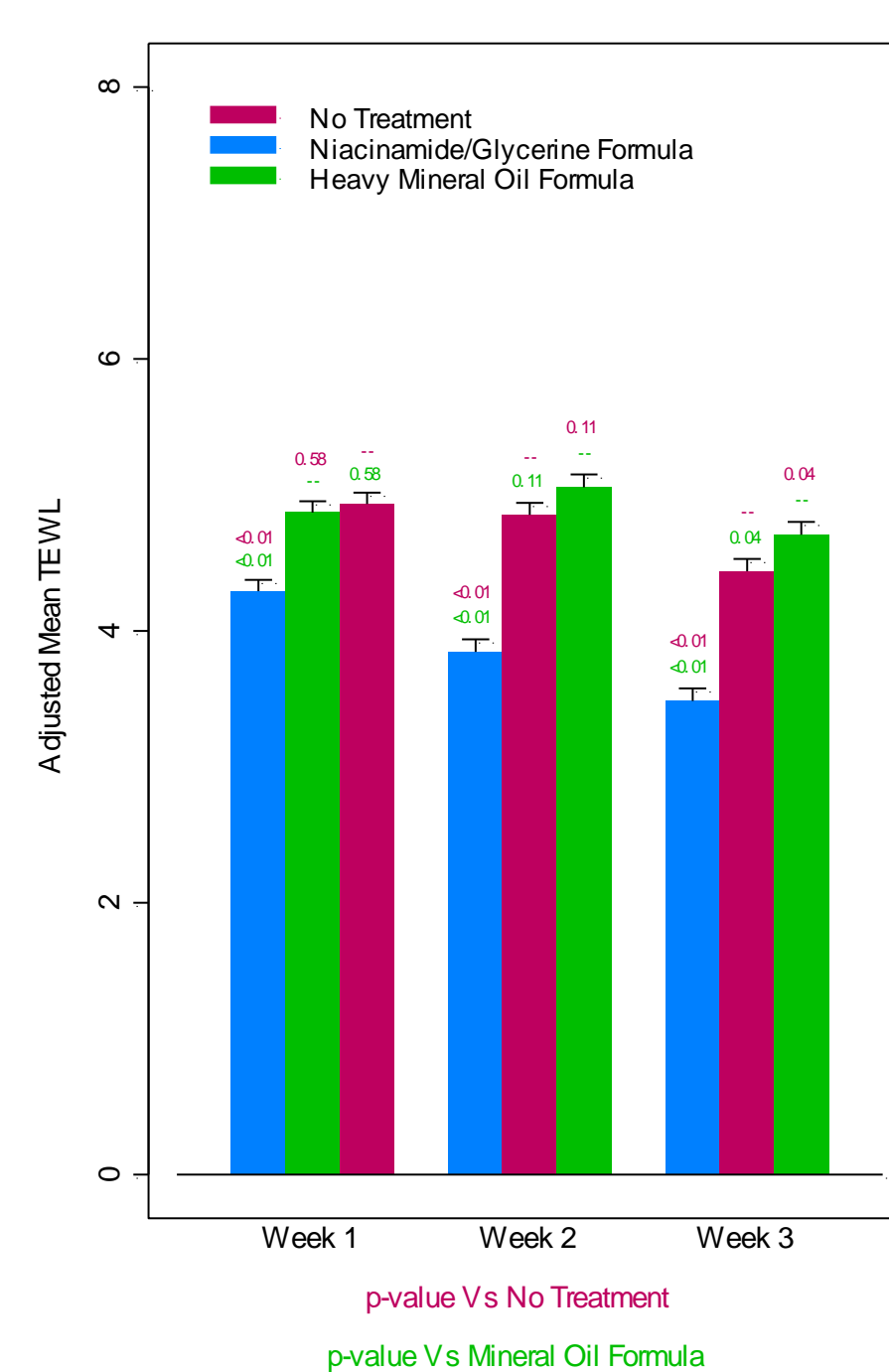
Study 2 Visual Dryness



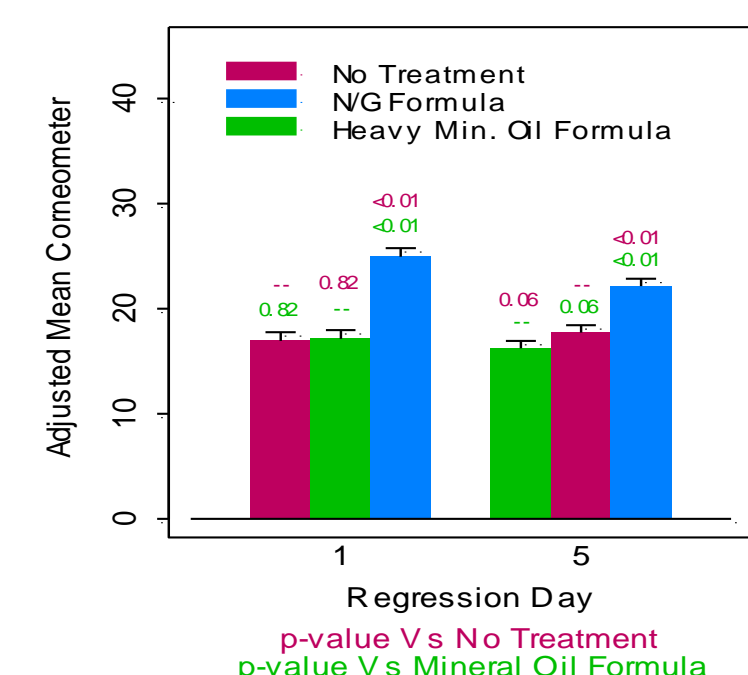
Study 1 TEWL



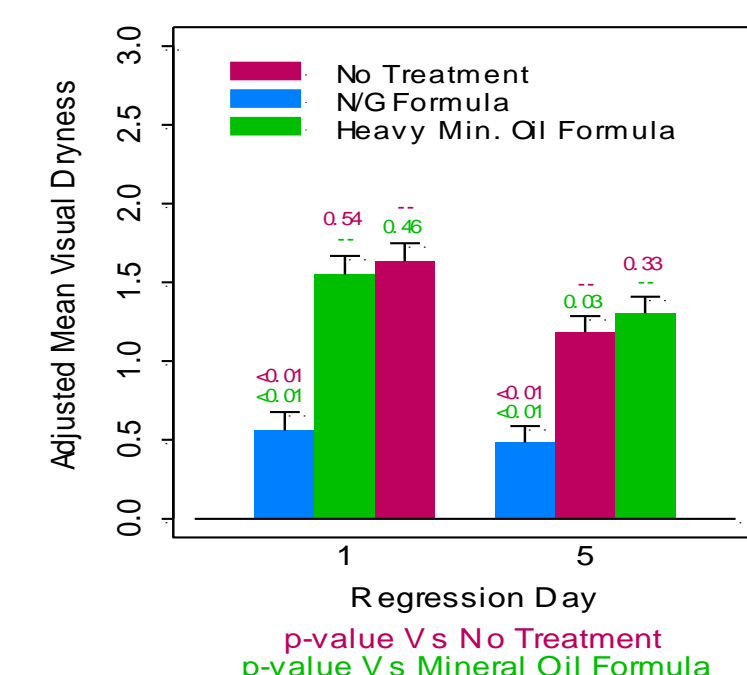
Study 2 TEWL



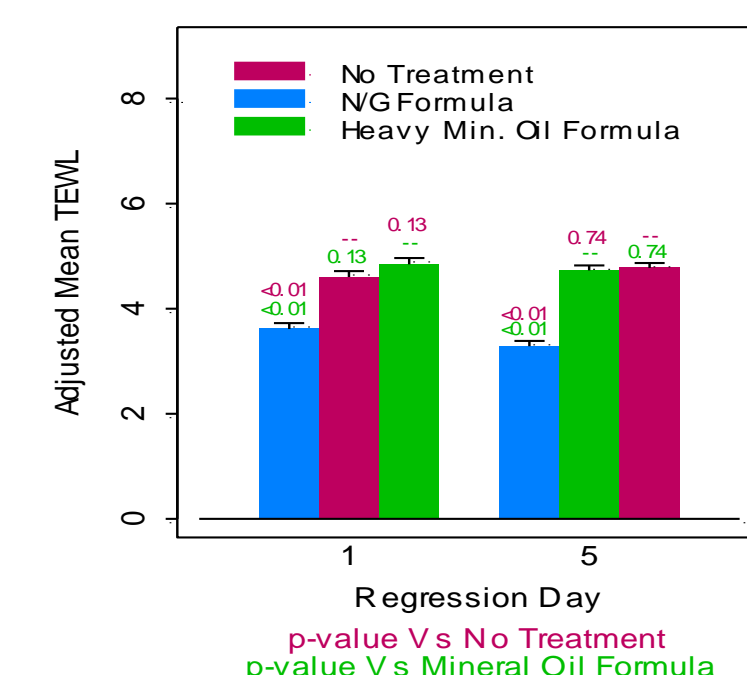
Study 1 Corneometer Regression



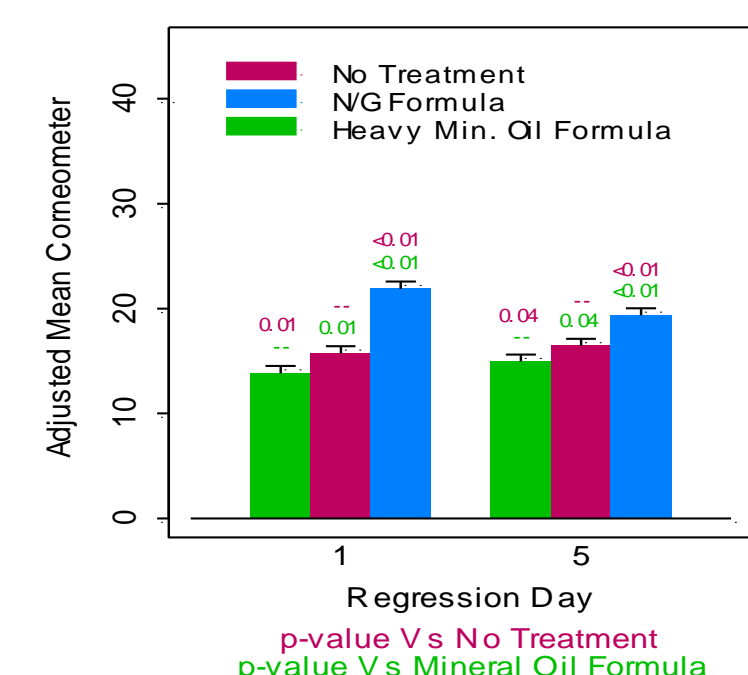
Study 1 Visual Dryness Regression



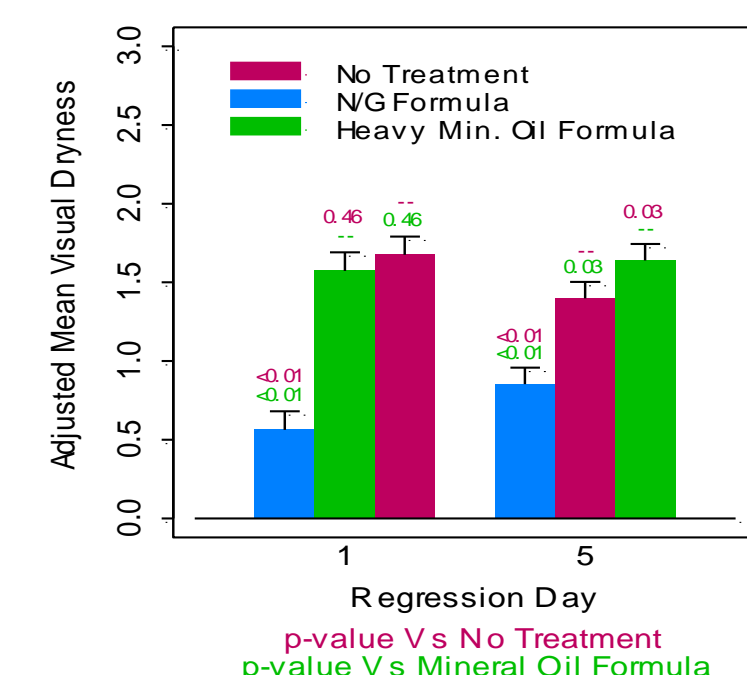
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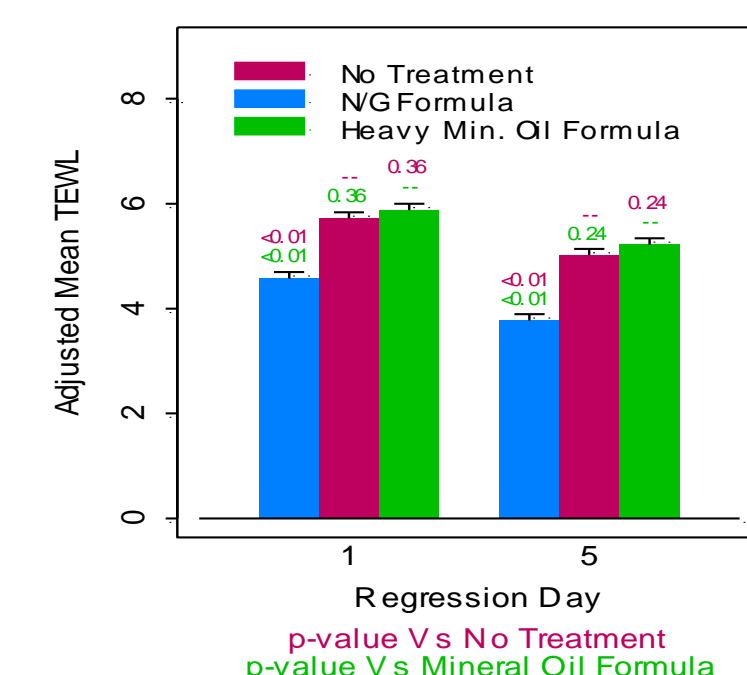
Study 2 Corneometer Regression



Study 2 Visual Dryness Regression



Study 2 TEWL Regression



DISCUSSION

The early benefits seen with the Niacinamide/Glycerin formula can be attributed to Niacinamide. Niacinamide-containing products for the skin, including facial moisturizers, have been shown to improve skin barrier function.

Cosmetic moisturizers formulated with Niacinimide go beyond moisturization to improve the integrity of the stratum corneum for improved skin benefits over time.

Traditional moisturizers such as those that contain high levels of mineral oil, a frequently used occlusive ingredient which dissolve fats and coat the stratum corneum to inhibit transepidermal water loss, yield an emollient effect that has been referenced to treat dry skin, (Skin Therapy Lett. 2005; 10:1-8) have not proven as effective in this study as compared to the Niacinamide/Glycerin product.

When formulated in combination with humectants such as glycerin, a well known lipid, water-soluble, hygroscopic substance, the Niacinimide/ Glycerin formula is very effective moisturizing, breaking the dry skin cycle and healing the moisture barrier.

CONCLUSIONS

There was insufficient evidence to detect a difference between the heavy mineral oil formula and no treatment for most endpoints.

The Heavy Mineral Oil showed more dryness 5 days after stopping treatment compared to the Niacinamide/ Glycerin formula.

The Heavy Mineral Oil formula was consistently less hydrating and showed more dryness during the treatment phase than the Niacinamide/Glycerin formula.

The Niacinamide/Glycerin formula showed higher moisturization at 1 week than any of the 3 weeks for the Heavy Mineral Oil formula.

After 1 week, the Niacinimide/ Glycerin formula provides significantly more moisturization than the Heavy Mineral Oil formula and the no treatment control.