

Facial Foundation with Niacinamide and N-Acetylglucosamine Improves Skin Condition in Women with Sensitive Skin

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INTRODUCTION

Facial foundation is a colored cosmetic that improves skin appearance by camouflaging underlying facial pigmentation and texture irregularities. Females typically wear facial foundation at least 8 hours daily, making the skin impact of this cosmetic profound. Two dermatologic populations, rosacea and ethnic sensitive skin, often experience difficulty with facial foundation due to increased skin sensitivity. New technology allows facial foundations to positively affect the skin by incorporating ingredients such as niacinamide and N-acetylglucosamine. We previously showed that a foundation product containing these ingredients benefits skin condition in women with normal skin.¹

OBJECTIVE

The objective of this study was to evaluate the tolerance and skin effects of a test facial foundation containing niacinamide and N-acetylglucosamine on subjects with rosacea or ethnic sensitive skin.

METHODS

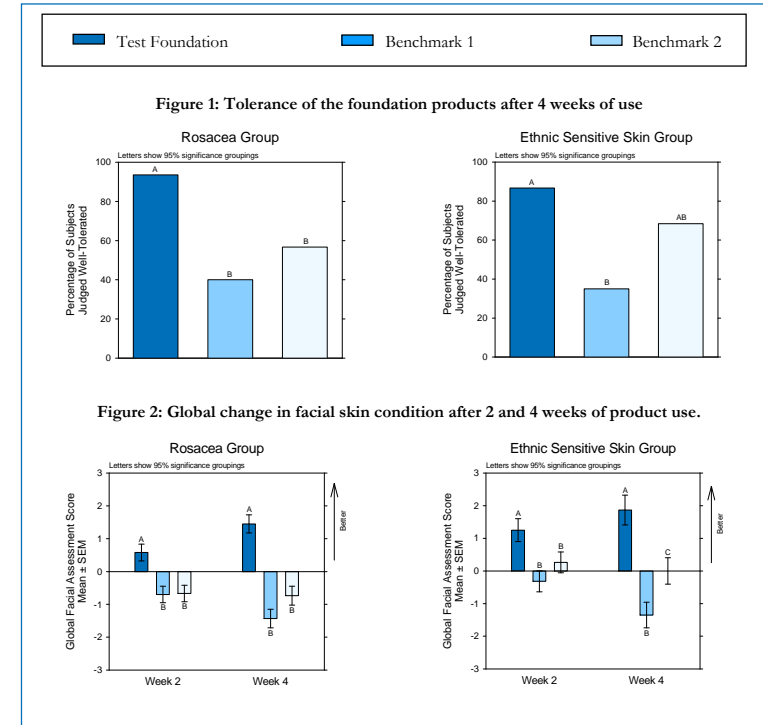
Adult females with rosacea (n = 90) or ethnic sensitive skin (n = 56) were enrolled in a 6-week, double-blind, parallel use study. Subjects underwent a 2-week washout where they were provided with a standard facial foundation, cleanser, and nighttime facial moisturizer. Subjects were then randomized to receive the test facial foundation (Test Foundation) or one of two benchmark facial foundations: a leading dermatologist-recommended brand (Benchmark 1) or a leading mass-market brand (Benchmark 2). Subjects chose an appropriate shade for their assigned product and applied it to their faces each morning over a 4-week period. A facial cleanser and a nighttime facial moisturizer were provided. The dermatologist investigator evaluated subjects' faces, and subjects completed a self-evaluation questionnaire at study end. Data were analyzed using Fischer's exact test or mixed-model techniques.

RESULTS

- At study end the dermatologist investigator judged that > 93% of subjects with rosacea tolerated the Test Foundation well, compared to < 57% of the subjects who used the benchmark products. (Figure 1)
- Similarly, > 86% of subjects with ethnic sensitive skin were judged to tolerate the Test Foundation, compared to < 69% of subjects who used the benchmark products. (Figure 1)
- The investigator also judged greater global improvement in facial skin condition among subjects assigned to use the Test Foundation than among subjects assigned to use the benchmark products. (Figure 2)
- The investigator scored less dryness (P < 0.01) and scaling (P = 0.1) at study end on the faces of subjects using the Test Foundation in both study groups, and less erythema (P ≤ 0.07) of subjects in the rosacea group who used the Test Foundation. (data not shown)
- In general, higher percentages of subjects assigned to use the Test Foundation agreed or strongly agreed that the product did not irritate or dry their skin, compared to the benchmark products. This outcome is consistent with the investigator's evaluations. (data not shown)
- In terms of cosmetic performance, higher percentages of subjects agreed or strongly agreed that the Test Foundation gave them the look they want and covered facial skin imperfections, compared to the benchmark products.

	Study Population	Test Foundation	Benchmark 1	Benchmark 2
Product gives me the look I want	Rosacea	60.0% ^A	13.3% ^B	40.0% ^A
	Ethnic Sensitive Skin	71.4% ^A	26.3% ^B	52.6% ^{AB}
Product covers imperfections	Rosacea	77.4% ^A	33.3% ^B	43.3% ^B
	Ethnic Sensitive Skin	80.0% ^A	40.0% ^B	52.6% ^{AB}

Superscripted letters show 95% significance groupings



CONCLUSIONS

Dermatologists have previously regarded facial foundations as colored cosmetics with little impact on skin health and lacking science. This study evaluated a new cosmeceutical facial cosmetic incorporating barrier enhancing niacinamide into the traditional pigmented cosmetic. Our research demonstrated that a carefully formulated facial foundation can be used as an adjuvant therapy in persons with sensitive skin.