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**OBJECTIVE**

To assess the effects of a nature-based regimen containing bakuchiol on skin moisture barrier and skin microbiome in subjects with atopic dermatitis / rosacea / sensitive skin

**METHODS**

**Subject Demographics:**

- 45 Female subjects with age range 35-70 years, I-VI Fitzpatrick skin type, with sensitive skin condition (N=16 with rosacea, N=15 with eczema and N=14 with cosmetic intolerance syndrome) and with mild-moderate aging skin

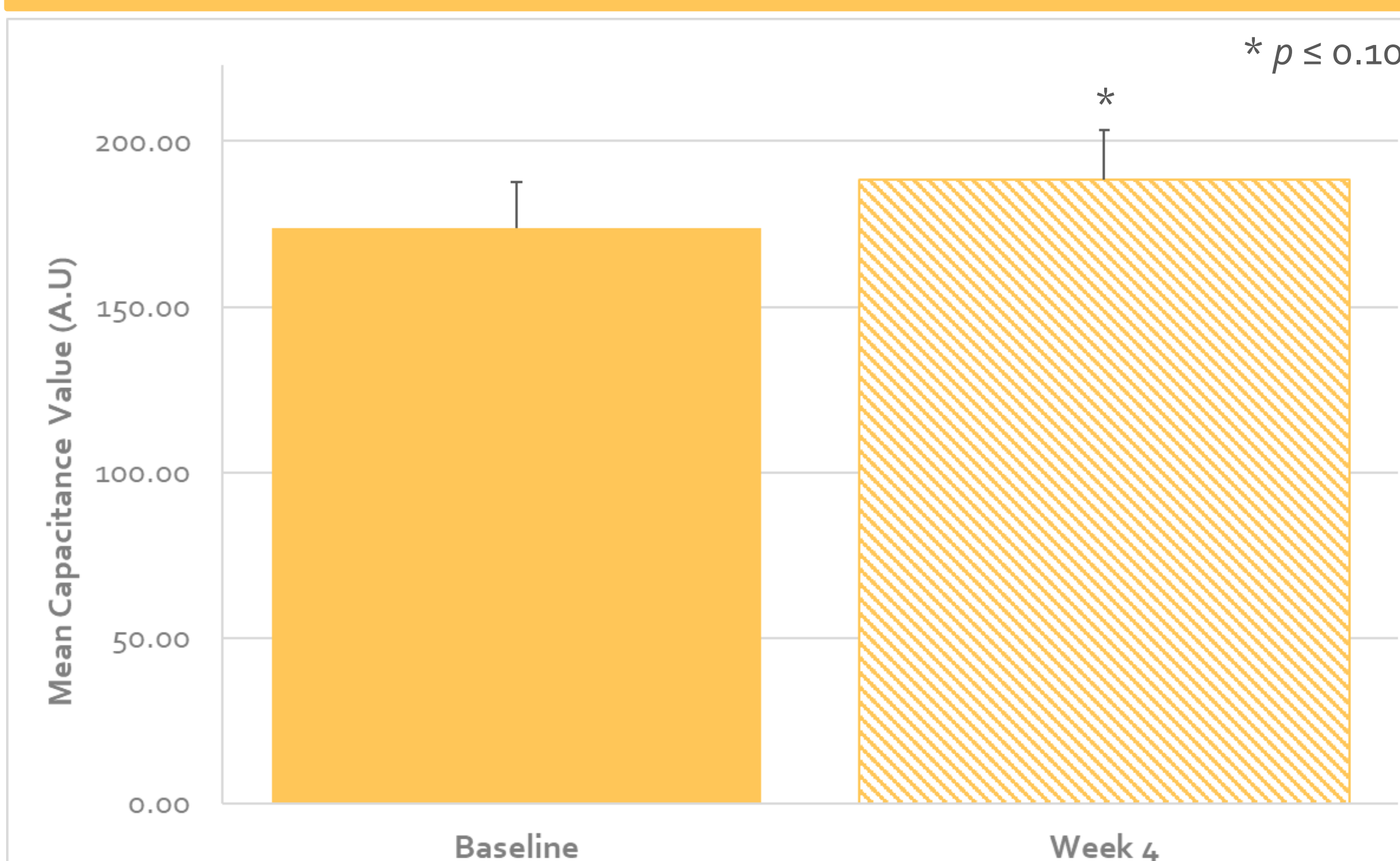
**Study Product Regimen**

- Cleanser with 0.5% bakuchiol – use AM and PM
- Serum with 1.0% bakuchiol – use AM
- Eye Cream with 0.5% bakuchiol – use AM or PM
- Moisturizing Cream with 1% bakuchiol – use AM or PM

**Assessments at Baseline and Week 4:**

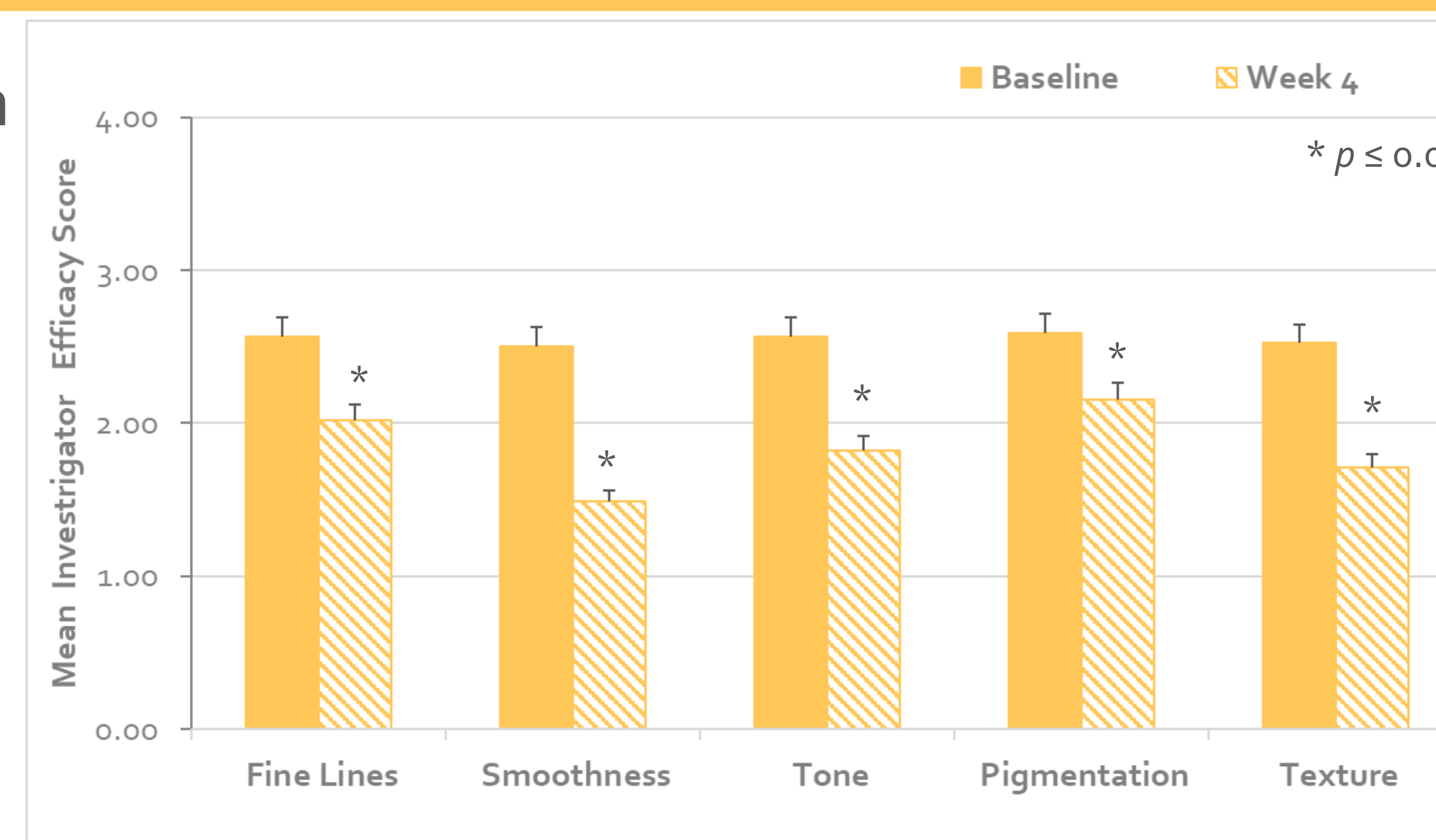
- Skin hydration by corneometry
- Skin moisture barrier function by evaporimetry
- Clinical grading by dermatologist-investigator for efficacy parameters (fine lines, smoothness, skin tone, pigmentation, and texture)
- Clinical grading by dermatologist-investigator for tolerability parameters (redness, dryness, peeling, and irritation) – data not shown
- Swabs of the nasolabial folds for microbiome analysis (subpanel of 20 subjects)

**RESULTS**



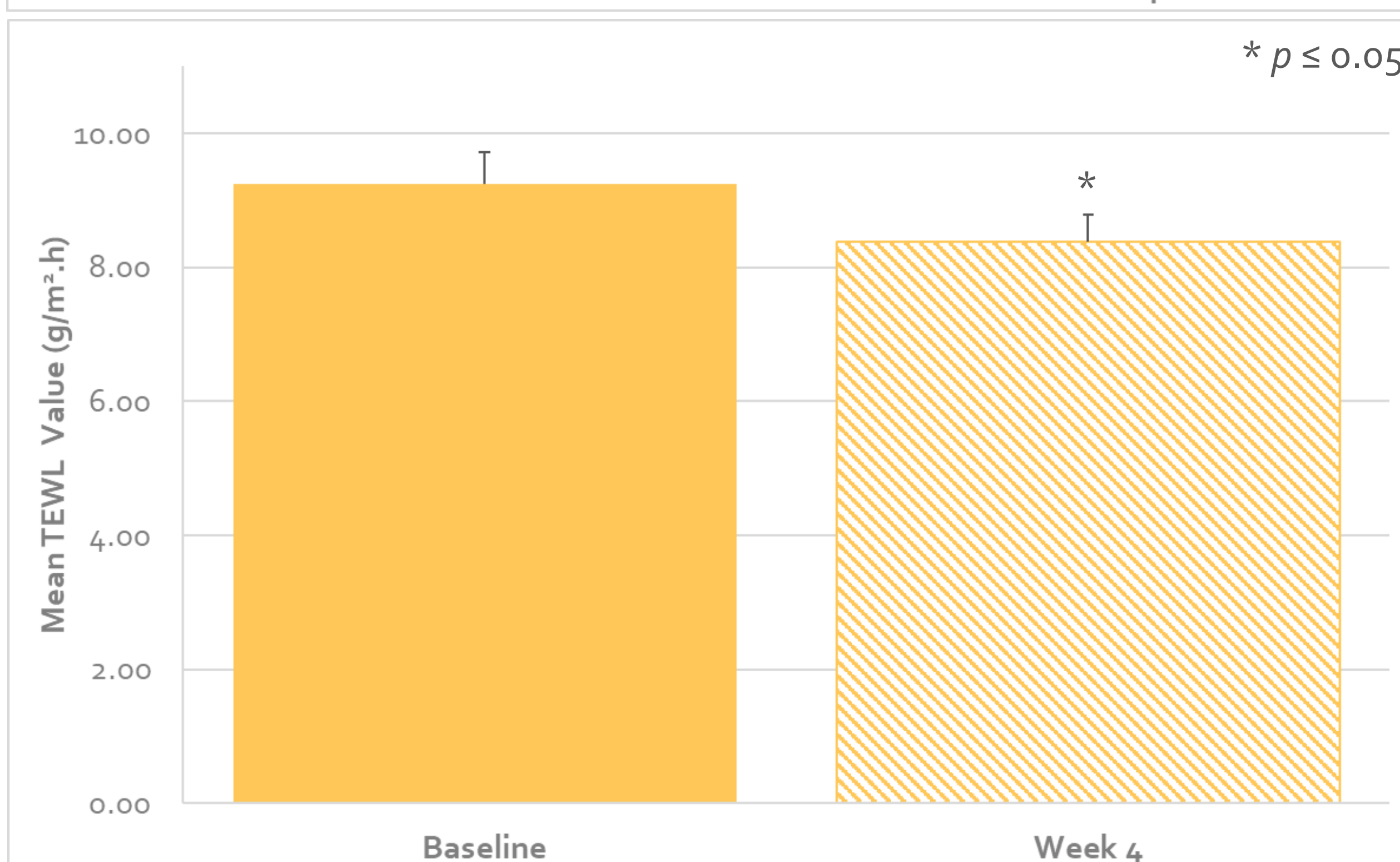
**Figure 1: Skin Hydration**

- Significant increase in skin hydration after 4 weeks of bakuchiol-containing skin care regimen.



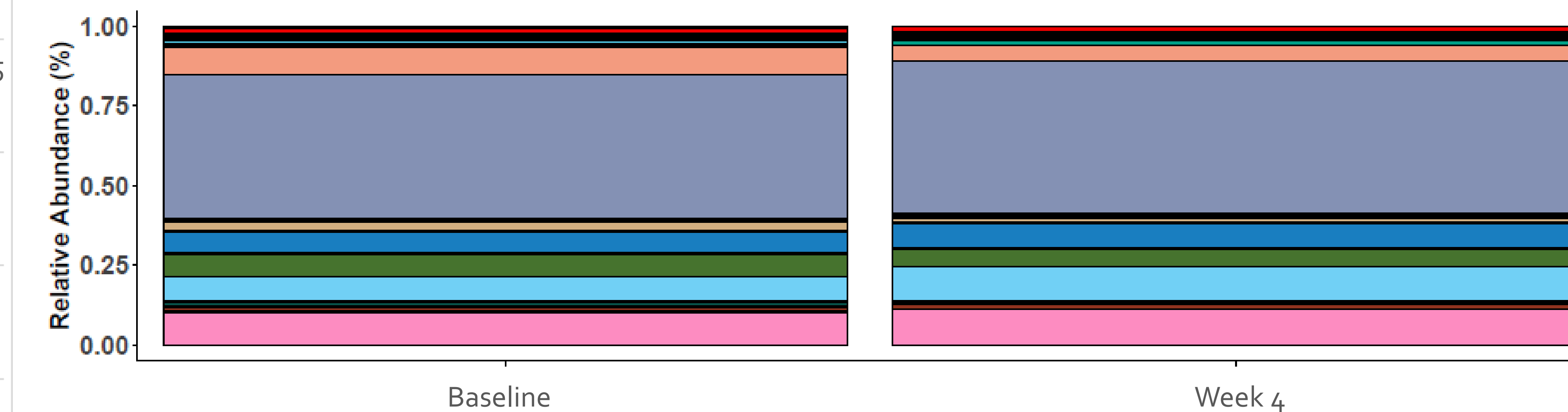
**Figure 3: Clinical Grading for Efficacy**

- Significant reduction in scores of fine lines, smoothness, tone, pigmentation, and texture from baseline, indicating that bakuchiol-containing skin care regimen improved skin appearance.
- No change in tolerability parameters of redness, dryness, peeling, and irritation from baseline. (Data not shown)



**Figure 2: Skin Barrier**

- Significant improvement in skin barrier function by 9% after 4 weeks of bakuchiol-containing skin care regimen.



**Figure 4: Skin Microbiome Analysis**

- No significant difference from baseline in the mean relative abundance of taxa at the phylum, family, genus, or species levels after 4 weeks of bakuchiol-containing skin care regimen.
- No significant difference from baseline in the Shannon diversity after 4 weeks of bakuchiol-containing skin care regimen. (Data not shown)

**Taxa**

- Achromobacter proteobacterium pi\_g
- Achromobacter\_u\_s
- Actinobaculum\_u\_s
- Actinomyces\_u\_s
- Anaerococcus\_u\_s
- Arthrospira ginsengisoli
- Bacillaceae\_u\_s
- Bd2-3\_u\_s
- Beijerinckiaceae\_u\_s
- Brevundimonas\_u\_s
- Burkholderia\_u\_s
- Cellulosimicrobium\_u\_s
- Corynebacterium variabile
- Corynebacterium\_u\_s
- Cutibacterium acnes subsp. defensans atcc 11828
- Facklamia\_u\_s
- Luteimicrobium subarcticum
- Methylobacterium komagatae
- Methylobacterium\_u\_s
- Microbacterium laevaniformans
- Neisseria mucosa
- Neisseria\_u\_s
- Neisseriaceae\_u\_s
- Oxalobacteraceae\_u\_s
- Prevotella\_u\_s
- Propionibacterium acnes
- Ralstonia\_u\_s
- Staphylococcus bacterium k2f20
- Staphylococcus epidermidis atcc 12228
- Steroidiphomonas\_u\_s
- Streptococcus luteicae
- Streptococcus sp. oral clone ascg04
- Streptococcus\_u\_s
- Thermoflavimicrobium g+c gram-positive ba
- Other

**CONCLUSIONS**

Overall, our results indicate that the natural-retinol alternative, bakuchiol-containing regimen is suitable as daily skin care for sensitive skin population.

- Bakuchiol-containing skin care regimen 1) Improved skin hydration, 2) Improved skin moisture barrier function, 3) Improved overall skin appearance without signs of irritation, and 4) Did not disrupt the skin microbiome