

## ABSTRACT

A healthy and moisturized skin is the result of a healthy and functioning barrier function. The barrier function mainly consists of the CE layer of the epidermis, which is formed by the cross-linking of *FLG*, *IVL*, and *LOR* genes that are catalyzed by *TGM-1* gene. However, due to many factors, the moisture and water content in the skin may be altered; thus resulting in dry skin. The usage of moisturizer may help to increase the water content on the skin. In this study, the efficacy of Moisturizer M01 was evaluated using instrumental analysis and gene expression analysis. There were 7 subjects that underwent four weeks of Moisturizer M01 treatment, with the right forearm as the treated area, while the left forearm remained untreated. All analyses were performed biweekly, and the sample collection was done using tewameter and corneometer for instrumental data, and using tape stripping method for qRT-PCR. The instrumental analysis results show that the water loss rate shows no significant changes, while the hydration level was increased indicating an improvement. Moreover, the skin appearance improved as the skin became smoother and softer, with a reduced sign of mild irritation marked by lower pigmentation. The results for qRT-PCR show no significant changes in the gene expression that may be caused by skin regeneration cycle. Overall, the moisturizer M01 shows to improve the skin condition and appearance after four weeks of usage.

**Keywords:** Moisturizer; Dry Skin; qRT-PCR; Instrumental Analysis; Tape Stripping Method