

# LabSkin to assess performance of cosmetic ingredients and formulations making anti-ageing claims

## OBJECTIVE

Repeated application of Retin-A and a consumer emollient to LabSkin full thickness living skin equivalent to determine the effect on procollagen I production in dermal fibroblasts by immunohistochemistry (IHC).

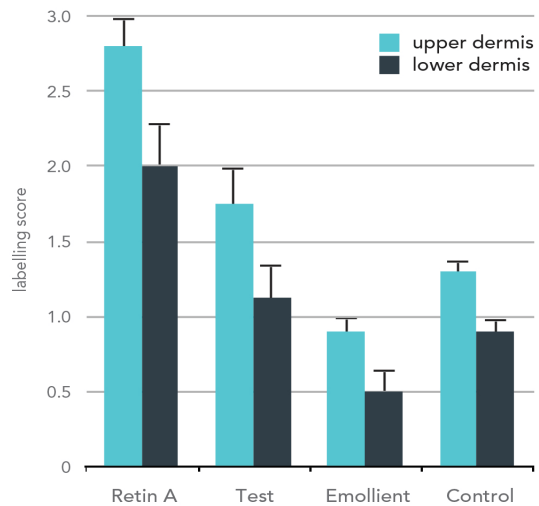
## METHOD

- Products were applied to the surface of LabSkin every day for 2 weeks.
- At each application, 20 µL of product was pipetted onto the surface and spread using a sterile glass rod.
- After treatment, 3 x 8 mm punch biopsies were removed from each LabSkin unit.
- Samples were formalin fixed and paraffin embedded for histology.
- Sections of 5 µm were prepared and immunohistochemistry was carried out to assess the expression of Procollagen-1 in dermal fibroblasts.

## RESULTS

Procollagen I immunolabelling associated with fibroblasts within the dermis of LabSkin was assessed by image scoring.

Figure 1 - Affect of products on procollagen production



## SUMMARY

Assessment of Procollagen production by immuno-histochemistry (IHC) in dermal fibroblasts in LabSkin full thickness living skin equivalent can be used to support anti-ageing claims for cosmetics ingredients and formulations benchmarked against products of recognised activity i.e. Retin-A

### DERMAL FIBROBLAST LABELLING SCORING



grade 1



grade 2



grade 3

LabSkin can be used within the same experimental design to simultaneously evaluate multiple factors including cytokine responses (i.e. IL-1α, PGE2, TNFα, IL-10 etc.), histological changes, wound repair and photo-reactivity in addition to skin commensal and pathogenic microorganisms.

## contact us

Innovenn UK Ltd.  
 The National Agri-Food Innovation Campus, Sand Hutton, York,  
 YO41 1LZ, Sand Hutton, York YO41 1LZ  
 +44 (0)1904 404036 [info@innovenn.co.uk](mailto:info@innovenn.co.uk)

