



# FactSheet

## **WOUND CARE AND SKIN BARRIER INTEGRITY**

## INTRODUCTION

SGS proderm has developed a number of human wound models for the evaluation of the efficacy of products in volunteers and patients in well-controlled experimental set-ups. The models assess the efficacy, safety and tolerability of wound healing products and of cosmetic products that aim for positive effects on skin barrier integrity.

Each of the following models can be performed for medical devices, medicinal products and cosmetic products.

## SERVICE OVERVIEW

- Abrasive wound model
- Suction blister model
- Scratch model
- Laser wound model
- Punch biopsy
- Tape stripping
- Burnings (1st degree)

## SUCTION BLISTER MODEL

The suction blister model creates blisters/wounds with accurate definition of wound size and depth. Negative pressure is applied to induce blisters whereby small wounds are generated.



Extraction of suction blister fluid

## ABRASIVE WOUND MODEL

Superficial wounds of approximately 2cm<sup>2</sup> are obtained by standardized abrasion. These wounds have a high similarity with real everyday wounds. This technique does not inflict pain on the subject.

## LASER MODEL

With the Laser model epidermal ablations are made with a laser commonly used in dermatology for skin resurfacing. The depths can be varied from the upper epidermal layers to deeper wounds with great reproducibility. Local anesthesia is required with this method.

## SCRATCH MODEL

The test procedure is a modification of the method published by Frosch and Kligman (The chamber scarification test. Contact Dermatitis. 1976; 2: 314-324). Here, a small area of skin is superficially damaged by scratching the horny layer.

## PUNCH BIOPSY

After administration of a local anaesthetic, the wound is created by means of a punch biopsy.

## TAPE STRIPPING

Repeated tape stripping causes removal of one cell layer from the stratum corneum (the outermost layer of the epidermis) and with that induces a superficial wound.

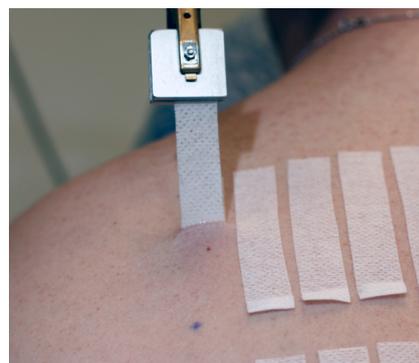
## BURNINGS (1ST DEGREE)

By means of a thermode, a first degree burn will be generated.

## FURTHER INVESTIGATIONS

### ADHESIVE FORCE

Adhesive materials can be investigated with regard to their adhesive properties and peel off force required for removal by instrumental measurements or visual assessments.



Adhesive force measurement

## KEY TECHNOLOGY

SGS proderm's expertise in quantitative instrumental assessments can also be applied to the evaluation of wounds, scars and the quality and rate of wound healing:

- Clinical photography with image analysis
- Surface measurement of wounds
- AquaFlux AF 200 / Tewameter
- IRT - Infrared Camera (Thermography)
- FLPI (Full Field Laser Perfusion Imager)
- Tissue cameras
- Vivascope / LC-OCT

## INVESTIGATIONAL PRODUCTS

- Gels
- Sprays
- Creams
- Dressings
- Cold plasma
- Foams
- Powder
- PRP treatments

## EXPERIENCE AND EXPERTISE

- 100+ studies conducted

## CONTACT

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