The Phenion® Full-Thickness (FT) Skin Model resembles native human skin in its histological architecture as well as in displaying a wide spectrum of corresponding physiological parameters.

The skin model production lab is located at the Biological and Clinical Research (BCR) Department within Henkel Beauty Care Technologies, Düsseldorf. To cover the needs of genotoxicity assessment of chemicals we are currently working on the validation of the Phenion® FT Skin Model for the Comet Assay. For further product details visit www.henkel.com/biological-and-clinical-research-43151.htm

Bioartificial human skin for R&D and safety assessment - commercially available since 2006
Phenion® FT Skin Models
The reliable tool for toxicological and efficacy studies

Features of the skin equivalent:
- Consists of human primary fibroblasts and keratinocytes from single donor origin
- Cell batches are carefully selected for optimal 3D-tissue composition
- Cornified surface
- Multi-layered epidermis
- The matured dermis displays excellent elastic fiber network
- Circular tissue with a diameter of 1.3 cm
- Long-term cultivation for at least 10 days allows repeated treatments
- Suitable for topical and systemical substance application

Both skin compartments exhibit physiologically relevant parameters:

Keratinocyte differentiation into a multi-layered stratified epithelium is associated with the expression of specific markers like cytokeratin 10, filaggrin, transglutaminase and involucrin.

At the dermal-epidermal junction zone crucial basement membrane proteins, like collagen IV and VII and laminin-5 support epithelial adhesion.

During maturation pivotal connective tissue components including collagenous and elastic networks - consisting of proteins like elastin and fibrillin-1 - are established in the dermis.

The Phenion® FT Skin Model allows investigation of the following exemplary endpoints:
- Epidermal and dermal differentiation
- Generation of the elastic system
- Safety and Efficacy testing of substances / products
- Cytotoxicity
- Genotoxicity
- Skin Metabolism
- Penetration
- Wound healing

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The Phenion® Full-Thickness Skin Model

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