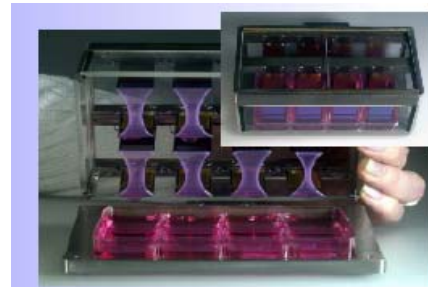


Scope

The most important physical characteristics of the collagen lattices are the intrinsic forces inside the equivalent dermis when the fibroblast cells tight the lattice during its development.

Those intrinsic forces are extremely low and consequently it is necessary to develop a highly sensitive and accurate device such as DermLab.



Current State of the Art Technology

The market-leading Collagen lattice fibroblasts today use molded techniques that consist of a fixed biocompatible mechanical beam enabling the measurement of some forces close to 10 mN, usually with strain gauge. The main problem of these devices is the lack of reliability of the grip. In addition, when the lattice is not fixed on the strip the results are uncertain because there is no way to know if the error comes from the attachment process or the lattice itself.

Laboratory & Clinical Advantages

Perceived clinical advantages of the DermLab are:

- Small dimensions and the suitability to be used as a micro system
- New Silicon grid will allow the lattice collagen to grip securely, allowing it to deliver precise measurements.
- Economical, eight skin culture plates per box

The DermLab next generation called DermLab OFS (DermLab Optical fluorescence System), is under development and tests. It is an extension of the DermLab solution that would allow new possibilities to comprehend the cellular interaction in addition to associate the cells organization in real time to the isotropic forces developed by the equivalent dermis.

Purpose of our tool

Conduct 100% measurements without animal or human being risks.

Pharmaceutical & cosmetic applications: active principles on the skin.

Define the effects of a substrate applied on the skin.

Tissue Engineers: Skin Culture and Fibroblast to characterize.

Conduct real time measurements of the associated effects on the skin and cell concentration.

Study the reconstructed skin for burned patients etc.

Phenomena observation.

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