

# SKINFIBROMETER UNIQUE INDENTATION INSTRUMENT

# FOR SKIN STIFFNESS MEASUREMENTS

#### PRODUCT BENEFITS

- Fully portable indentation instrument
- Measures stiffness of skin and upper subcutis
- Fast and convenient measurement
- Does not alter skin structure
- · Battery operated
- · Wireless data collection with DelfWin software





#### APPLICATION AREAS

- Changes of biomechanical properties of tissues
- · Assessment of skin and subcutaneous induration
- Edematous conditions

- · Skin research studies and clinical trials
- Medical applications
- Personal care industries



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### SKIN STIFFNESS

The measurement of skin stiffness has been challenging with conventional devices that easily alter the measured skin structure. To eliminate this and to introduce quick and practical stiffness measurements, Delfin has developed the new portable SkinFibroMeter.

The SkinFibroMeter utilizes an indenter that is briefly pressed on the skin. The skin resists the change in shape to external force. Thus the skin response under a short-term load indicates its stiffness properties.

## SKINFIBROMETER INSTRUMENTATION AND MEASUREMENT **PRINCIPLE**

The SkinFibroMeter consists of a 1 mm length indenter, a reference plate and built-in force sensors. The probe is briefly pressed against the skin surface with a device-controlled force. The indenter imposes a constant deformation when the reference plate is in full contact with the skin. The skin and the upper subcutis resist the deformation and

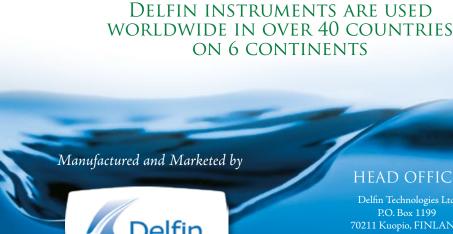
the skin instant stiffness value is determined.

This measurement principle is based on the analysis of the biomechanical response of the skin and subcutaneous tissue. The response is mathematically modeled using 3D computational FE (Finite Element) analysis. The SkinFibroMeter may

be used either as a stand-alone device or measurement data may be collected wirelessly to the DelfWin software.

The DelfWin software allows users to set up individual projects, store and view measurement data and plot the results or export them to other programs for editing.





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