

## CUTISCAN® CS 100

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Courage & Khazaka



### BENEFITS

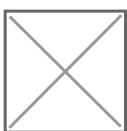
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- 🕒 Innovative new approach to understanding skin mechanical properties
- 🕒 Information about the elastic and viscoelastic properties as well as on anisotropy and directionality of the skin
- 🕒 Complete video for each measurement
- 🕒 Data can be exported to Excel®
- 🕒 3D graphical representation of suction

The CutiScan offers a new dimension for looking at the mechanical properties of the skin (viscoelasticity & anisotropy) . It measures the lateral skin displacement during circular suction/relaxation by video (optical flow). It adds information to that produced by the already well-renowned Cutometer® elasticity measurement. There are no limits to applications wherever skin aging and elastic properties play a role.

### MEASUREMENT PRINCIPLE

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The novel probe combines mechanical force with imaging in a unique way. It consists of a suction ring (14 mm diameter) which draws the skin uniformly in all directions with a constant negative pressure provided inside the CutiScan-device for some seconds and then releases the applied pressure completely again for some seconds. During the suction and recovery time a high resolution CCD camera inside the probe (in the middle of the suction ring) monitors the displacement of each pixel by an optical flow algorithm (Horn-Schunk method) in a video. From that video an overall graph is generated. These graphs lead to interesting measurement parameters. Each direction in the graph is displayed as a curve of suction vs. relaxation (related to those known from other mechanical measurement methods for the skin). The black arrows

indicated the displacement during suction time. The higher the skin's ability to resist the displacement, the more firm the skin. The red arrows indicated the returning of the skin into its original position by itself when the pressure in ceased. According to its elastic/viscoelastic properties skin cannot get back to the original position immediately after the pressure has stopped.

## TECHNICAL INFORMATION

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Device: Dimensions: 36 x 19 x 8 cm (W x D x H), Weight: 4 kg, Power supply: external 100-240 VAC, 47-63 Hz, DC 12V/4A, Port: USB Probe with integrated camera unit: Dimensions: 14.5 x 5.5 x 4.7 cm, Weight: approx. 370 g, Suction ring: 14 mm Ø, Connections to device: pneumatic and USB, Cable length: approx. 150 cm Camera module: Image area: circular 5 mm Ø, Resolution: 1280 x 1024 pixel (approx. 1.3 Megapixel), Illumination: 20 UV-LEDs, (390nm - 395nm) Measurement principle: suction (pressure setting up to 500 mbar) with simultaneous video of the displacement of the single image pixels, Units: displacement in pixel

Technical changes may be made without prior notice.