# DermaLab® Combo

## Technical Specifications

### Main Unit
- **Computer:** Windows-based tablet or laptop.
- **Connectivity:** USB and Ethernet, computer to interface unit via Bluetooth.
- **Application software:** Dedicated LabView® based software.
- **Data export:** Data may be exported to Excel spreadsheets.
- **Dimensions:** 24 x 23 x 9 cm.
- **Options:** USB connected storage medias, USB or wireless printer/keyboard/mouse.

### HIGH FREQ. ULTRASOUND
- **Frequency:** 20 MHz, focused ultrasound.
- **Resolution:** 60 x 200 micrometer (ax x lat).
- **Penetration:** 3.4 mm.
- **Probe:** Rotating transducer, scan length 17 mm, footprint 11 mm.

### ELASTICITY
- **Principle:** Stress/strain by suction.
- **Range:** 0 - 4.5 mm elevation, adjustable neg. pressure setting 150, 400, 650 mbar. Preadjustment for skin thickness (default 1 mm).
- **Probe:** 10 mm suction aperture. Ultra low weight for minimum skin bias. Adheres to the skin by double adhesive sticker.

### HYDRATION
- **Principle:** Conductance, single frequency.
- **Range:** 0 - 9999 microSiemens.
- **Resolution:** 1 microSiemens.
- **Accuracy:** 5%.
- **Probe:** Flat Faced Probe w. traditional, circular electrode design. Spring loaded trigger action.

### TEWL
- **Principle:** Diffusion gradient.
- **Range:** 0 - 250 g/m²/h.
- **Resolution:** 0.1 g/m²/h.
- **Accuracy:** 5%.
- **Probe:** Two combined humidity/temperature sensors in 10 mm cylindrical diffusion chamber.
- **Environment check:** RH and temperature.

### VIDEO SCOPE
- **Resolution:** 1.3 megapixel.
- **Magnification:** 10 - 50x (depends on screen size).
- **Light:** Polarized/non-polarized setting.

### SKIN COLOR
- **Probe:** Color sensor w. 64 active elements, clear front for accurate positioning. Illumination by two angled white LED’s. Optical focusing on 7 mm diam. target area. Insensitive to ambient light.

### SEBUM
- **Collection material:** Microporous polymer film.
- **Measurement principle:** Translucency characteristics of sebum collecting material.
- **Range:** 0.0 - 100.0 %.
- **Resolution:** 0.1 %.
- **Accuracy:** 5 %.

### SKIN TEMPERATURE
- **Measurement principle:** Non-contact infrared detection.
- **Range:** 10 - 50 deg. C.

### SKIN pH
- **Probe type:** Standard gel filled surface type probe, fast response time.
- **Range:** 1.00 - 11.00 pH.
- **Accuracy:** ±0.01 pH @ 25 deg. C.

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*Specifications may change without further notice.*
**Multiparameter skin analysis**

The DermaLab® Combo features up to ten skin parameters in one instrument as well as intuitive application software wirelessly controlled by the included tablet.

In the DermaLab® Combo we have concentrated all our knowledge in one flexible concept with the goal to be able to offer all parameters in one instrument.

The result is an instrument, which offers high frequency ultrasound for instant skin assessment in combination with more traditional skin parameters such as elasticity, hydration, sebum, TEWL etc. Simply customise your DermaLab® Combo for the desired application by adding probes as needed.

The DermaLab® Combo is easier and more intuitive to operate than ever with new application screens, larger touch-screen, and it comes loaded with our dedicated LabView®-based application software.

**SkinLab Combo**

For scientific skin research applications and applications within the cosmetic and pharmaceutical industry the DermaLab® Combo offers a complete selection of skin parameters, which may be freely configured to fulfill specific testing needs.

The operating principles of the available probes and software application modules are based on measurement principles, for which generally acknowledged guidelines have been established, and measurements are presented in standardised SI-units where applicable.

The broad spectrum of professional applications includes claims substantiation, irritancy/allergy testing, rating of moisturizers as well as efficacy testing of topical agents for various skin conditions.

A unique feature of the device is the ability to automatically quantify collagen levels by the implementation of high frequency skin ultrasound technology in its most sophisticated form.