

DermaLab Hydration Probe



Hydration Probe, Pin or Flat

The Hydration Probe is used for measuring the water binding capacity of the outermost layer of the skin. Either as a stand-alone measurement or before and after a skin hydration treatment. Its spring-loaded design ensures that measurements are taken under consistent pressure, enabling rapid and precise measurement cycles. The accompanying hydration software supports up to eight sequential measurements, calculating the average value for enhanced precision.

The Hydration Probe is available in a traditional flat design, as well as a pin probe, which is better suited for use on hairy areas.

Technology

The Cortex hydration probe measures skin conductivity which correlates with skin hydration. The higher the moisture in the skin, the higher the conductivity measured.

The measurement is given in μS (SI unit), which is an expression of the skin's conductivity.

The hydration probe is available as stand-alone (DermaLab Single) and as part of the multi-parameter DermaLab Combo unit.

Specifications

- Principle: Conductance
- Options: Flat faced or pin electrodes
- Calibration: Calibration checker available
- Measurement frequency:
 - 300 kHz for hydration pin,
 - 100 kHz for hydration flat
- Measurement uncertainty: $\pm 5\%$
- Measurement time: 1 second
- Measurement readout: 0-9999 μS (1 μS resolution)

Benefits

- The Hydration Pin Probe can be used in areas with hair, which is an advantage compared to other probes based on conductivity or capacitance measurements.
- The device will allow the user to take measurements in few seconds.
- The PIN design will minimize occlusion due to the very small pins and the ventilated space between the pins.
- The gold plated pins will prevent oxidation of the electrode which ensures long term stability and high quality measurements.
- The probe is small and light, allowing easy handling and measurement.
- The use of high quality materials and metal enclosure provides a very robust construction. The measurement is activated by pressing the probe against the skin.
- A spring load in the probe ensures constant pressure on the skin, enabling consistent conditions during the measurement.
- The hydration probe is supplied with a probe control unit that allows the user to test the probe before use.

APPLICATION

The most superficial layer of the epidermis, the stratum corneum, plays a crucial role in retaining skin hydration. The stratum corneum forms a barrier to protect underlying tissue from infection, dehydration, chemicals and mechanical stress.

Dry skin is a common condition experienced by most people at some point in their lives. Seasonal dry skin is common during the cold dry winter months and often dry skin becomes more prevalent with age. Some inflammatory skin conditions such as atopic dermatitis and psoriasis cause localized areas of dry skin.

Application areas

The application areas for the Hydration Probe are many, including:

- Anti-aging products
- Anti-itching products
- Anti-wrinkle products
- Moisturizing creams and treatments
- Skin barrier improvements
- Elasticity improvement
- Texture/appearance improvements
- Dry skin
- Thick, scaly skin
- Fine lines & scalp hydration

The Hydration Probe

is one of 11 parameters available for the customizable skin analysis tools: The DermaLab Combo and the DermaLab Mini. This Probe is also available as a single parameter.

To learn more about our solutions, visit cortex.dk



Cortex

Niels Jernes Vej 6B
9220 Aalborg
Denmark
+45 9857 4100
cortex@cortex.dk
www.cortex.dk