

# VAPOMETER

## PRACTICAL AND RELIABLE TEWL, EVAPORATION AND PERMEABILITY MEASUREMENTS

### PRODUCT BENEFITS

- † Immediately ready to use – no daily calibration procedure required
- † Practical and reliable TEWL and evaporation measurements
- † Wide measurement range – accurate up to 200 g/m<sup>2</sup>h
- † Fully portable and battery operated – no cables
- † Does not change skin's natural behavior – no artificially created climate change
- † Non-sensitive to ambient airflows
- † Wireless connection to PC
- † Use in all angles
- † Short measuring time, typically 10 seconds



### APPLICATION AREAS

- † TEWL, Skin barrier function, Penetration studies
- † Effect of skin care, treatment and nutrition
- † Wound healing
- † Sympathetic skin response, Hyperhidrosis
- † Skin irritation
- † Water loss through nails, scalp, lips
- † Skin surface water loss
- † Efficacy and safety testing, Claims validation
- † Material permeability, *in-vitro* studies
- † Animal health and Zoology

## VAPOMETER INSTRUMENTATION

The VapoMeter measures transepidermal water loss (TEWL) and evaporation rate as  $\text{g}/\text{m}^2\text{h}$ . It may be used either as a stand alone device or measurement data may be collected wirelessly to the DMC software.

The DMC software allows users to set up individual projects and plot and print the results or export them to other programs for editing.

The VapoMeter is battery-operated and portable. This offers great freedom of movement and the possibility of measuring difficult areas. Changeable and re-usable adapters are available for different *in-vivo* and *in-vitro* user applications.

## CLOSED CHAMBER PRINCIPLE – NO DAILY CALIBRATIONS

The core of the VapoMeter is a sensitive humidity sensor that is inside a cylindrical measurement chamber. This chamber is closed by the measurement surface during the measurement period and is unaffected by ambient airflows. The sensor monitors the increase of relative humidity (RH) inside the chamber during the measurement. The evaporation rate value ( $\text{g}/\text{m}^2\text{h}$ ) is automatically calculated from the RH increase. The chamber is passively ventilated between measurements and the ventilation time is automatically controlled.

## ADAPTERS FOR DIFFERENT APPLICATIONS



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## HEAD OFFICE

Delfin Technologies Ltd  
P.O. Box 1199  
70211 Kuopio, FINLAND  
tel. +358 50 911 1199  
info@delfintech.com