

A close-up photograph of a person's shoulder and neck, showing smooth, dark skin. The person's head is tilted slightly, and their chin is visible at the top of the frame. The background is a neutral, light-colored wall.

DELFIN

VapoMeter® (VX) Presentation 2026

(주)파메트릭(PharMetric)

Introducing

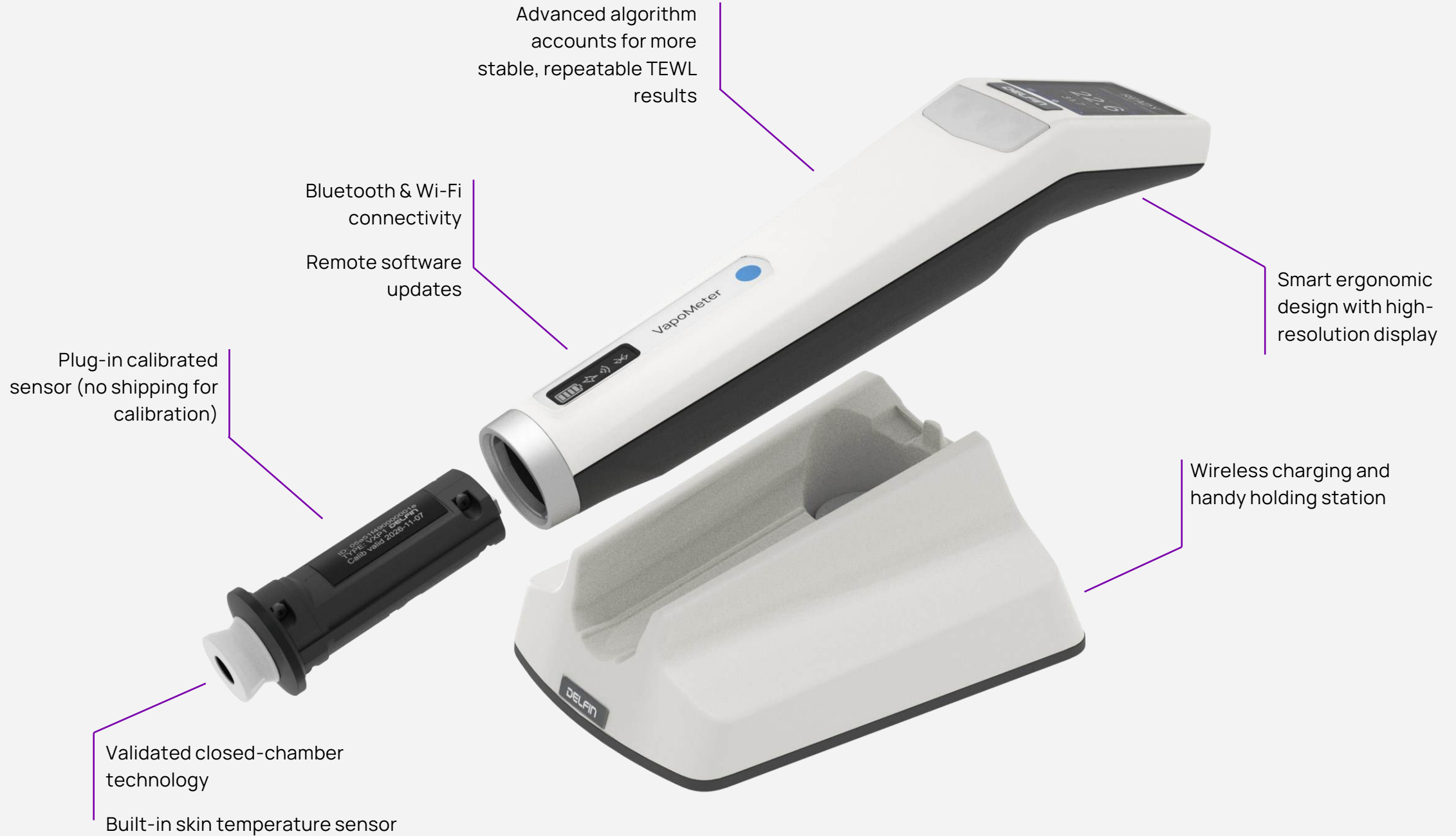
The New

VapoMeter® (VX)

At Delfin Technologies, we empower better lives through innovative solutions that measure, analyze, and unlock valuable insights into skin health.









What Does It Measure?

Transepidermal water loss (TEWL)

- ✓ Measures TEWL (transepidermal water loss) in vivo and the evaporation rate in vitro in $\text{g/m}^2\text{h}$
- ✓ Closed chamber measurement principle
- ✓ Water evaporation through skin is detected with humidity sensor
- ✓ Application areas:
 - Skin barrier function evaluation
 - Product R&D, claims validation, performance characteristics of skin care products
 - Effect of skin care, treatment and nutrition
 - Skin irritation
- ✓ In vitro studies*

*VapoMeter® SWL5 model available for diffusion cell / in vitro studies



What's New in VapoMeter®?

Key innovations

- ☑ Smart ergonomic design with high-resolution display
 - ✓ Increased user convenience with optimized screen placement and clear visuals
- ☑ User-replaceable calibrated sensor (no shipping for calibration)
 - ✓ No downtime, logistics costs related to factory recalibration or study interruptions
- ☑ Built-in skin temperature sensor
 - ✓ Helps quality control, and better interpretation of results
- ☑ Remote software updates
 - ✓ Continuous access to the latest features and improvements



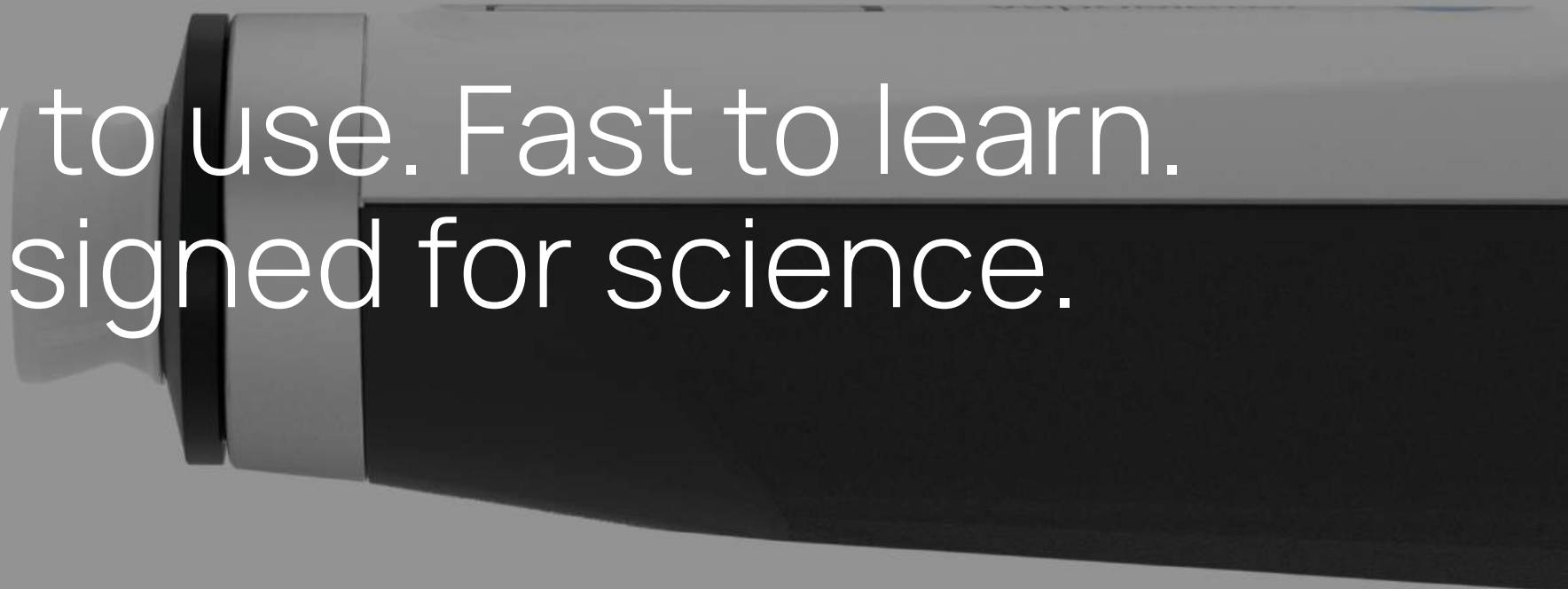
What's New in VapoMeter®?

Key innovations

- ✔ Bluetooth & Wi-Fi Connectivity
 - ✓ Seamless data transfer without cables
- ✔ Intelligent guidance and error prevention
 - ✓ Improves inter-operator repeatability and study robustness
- ✔ Sensor check procedure
 - ✓ Enables routine performance verification before studies
- ✔ ESG-friendly, reusable design
 - ✓ Supports sustainability and corporate ESG goals



INTRODUCING THE NEW VAPOMETER® (VX)



Easy to use. Fast to learn.
Designed for science.

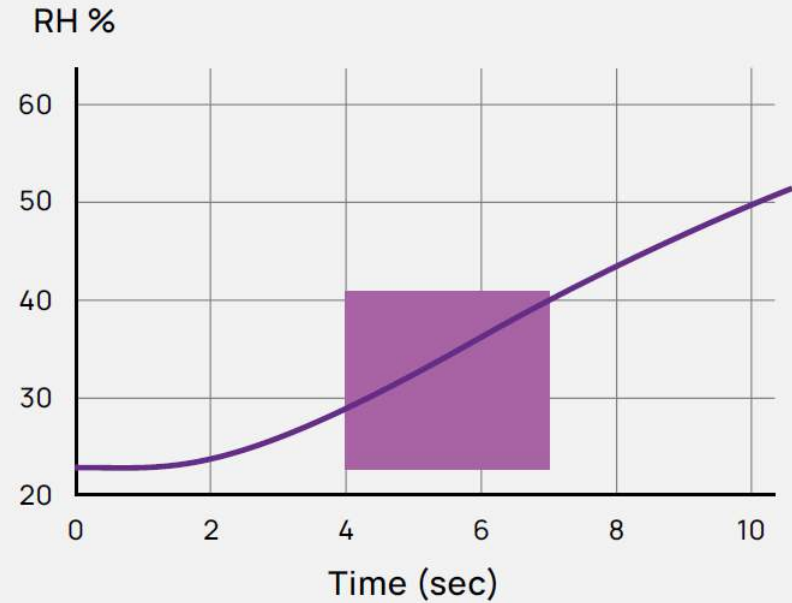
Skin measurement devices that advance skin science

Easy Operation with Trusted Science

Same validated method. Modern experience.

- ✓ Benefits of closed chamber
- ✓ Unaffected by ambient airflows like breathing, air conditioning, etc.
- ✓ Orientation free and can be used at any angle
- ✓ Has no saturation at high TEWL values
- ✓ Fast, measuring time 7 – 12 seconds

Measurement principle. TEWL is calculated from the RH increase in the closed chamber.





Smart Simplicity. Reliable Science.

Powered by Delfin's validated closed-chamber technology

The new VapoMeter® delivers fast and repeatable TEWL measurements that are independent of air movements, making it ideal for both laboratory and on-site testing. With improved usability, plug-in calibration, and real-time skin temperature tracking, VapoMeter® helps you focus on results.

Advanced algorithm accounts for local temperature and humidity dynamics — for more stable, repeatable TEWL results.

Available in Two Pricing Models

Included calibrated sensor
Ongoing calibration
Operational security
Warranty period
Calibration certificate + report
Sensor check procedure
Carrying case
Remote software updates (security and features) OTA
Charging dock / holding station
Connectivity
Changeable probe / plug-in calibration
Automatic sensor shipments
Best for

VapoMeter®

✓ 1 sensor (installed)
User buys a new calibrated sensor when needed (890€)
✓ 2-year warranty
✓ 2 years
✓ 1 year
✓ Included
✓ Included
✓ Included
✓ Included
✓ Bluetooth & Wi-Fi
✓ Included
No
✓ Occasional and/or project use

VapoMeter®

✓ 1 sensor (installed)
✓ 4 additional calibrated sensors shipped automatically during 5 years - included
✓ 5-year full operational security (all failures handled except obvious user-caused breakage)
✓ 5 years
✓ 1 year + covered via replacement sensors
✓ Included
✓ Included
✓ Included
✓ Included
✓ Included
✓ Bluetooth & Wi-Fi
✓ Included
✓ Yes - 4 sensors delivered to customer doorstep
✓ High-volume labs, CRO's, industrial R&D, quality-sensitive users

*Check Pro Package availability from the local distributor





Why the VapoMeter® Pro?

VapoMeter® Pro package is unique because

- ✔ Zero calibration downtime
Calibrated sensor delivered to your door. No interruptions, no shipping, no admin burden.
- ✔ 5-year full coverage
5-year operation security. Guarantee covering mechanical, electronic, and sensor-based components.
- ✔ Predictable cost-of-ownership
No unexpected costs. Easy for budget predictability. Fits procurement models.

Utilized in Various Study Settings Across Industries

Measurement and study applications



Skin measurements (In vivo)

- 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
- Animal health and Zoology



Diffusion cell measurement (In Vitro)*

- Basic idea is to ensure *in vitro* sample integrity when applied to Franz Cell / Diffusion Cell
- Suitable adapters for diffusions cells

*VapoMeter® SWL5 model available for diffusion cell / in vitro studies





Wide Applicability in Cosmetic Product R&D

Cosmetic claim validation

- ✓ Skin Barrier Protection / Repair
- ✓ Reduction in Water Loss
- ✓ Occlusive or Protective Effect
- ✓ Soothing / Sensitive Skin Claims
- ✓ Comparison of Product Performance
- ✓ Pre-Post Stress Recovery
- ✓ Skin Ageing
- ✓ Atopic Dermatitis
- ✓ Peeling skin (desquamation)
- ✓ Roughness
- ✓ Pollution
- ✓ Scalp sensitivity
- ✓ Nail hydration



Pharmaceutical Studies And Clinical Trials

Pharmaceutical research applications

- ✓ Atopic Dermatitis, Eczema, and Psoriasis
- ✓ Barrier Damage from Topical Treatments or Devices
- ✓ Safety and Irritation Testing (Patch or Repeat Insult Tests)
- ✓ Wound Care and Healing Dynamics
- ✓ Diabetes and Peripheral Skin Health
- ✓ Contact Dermatitis: Occupational or Drug-Induced
- ✓ Systemic Drug Impact on Skin Barrier
- ✓ Photodamage and Environmental Exposure Studies
- ✓ Skin sample integrity (in vitro)*

**VapoMeter® SWL5 model available for diffusion cell / vitro studies*

Benefits that Save Time And Trouble.

VapoMeter® supports your research

- ✔ Objective data collection
- ✔ Efficacy and safety assessments
- ✔ Regulatory compliance
- ✔ Product development research
- ✔ Cost-effectiveness in research
- ✔ Understanding of skin physiology and biology
- ✔ Investigating skin diseases
- ✔ Personalization and innovation
- ✔ Evaluating the impact of environmental factors on skin





Trusted. Validated. Proven.

Scientific reference

- ✔ [List of reference](#) for scientific studies related to VapoMeter® and transepidermal water loss (TEWL) measurements.
- ✔ 1000+ Scientific articles
- ✔ Trusted by leading companies in cosmetics and pharmaceutical field

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