



SKINLABS  
INNOVATIVE SOLUTIONS

APRIL  
2026

# Skinlabs Insight

**Welcome to Skinlabs!**

*Curious about who we are  
and what drives us?*

In this issue, we're excited  
to bring you Delfin's all  
new VapoMeter® (VX).

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## DELFIN

VapoMeter® (VX)

Fast, Easy and  
Scientifically Trusted  
TEWL Measurement.

**DELFIN TECHNOLOGIES:**

Meet the Next-Generation  
VapoMeter® (VX):  
Upgraded Precision in Skin  
TEWL Measurement

**NEW INSTRUMENT – NEW TECHNOLOGY**



**VapoMeter® (VX)**



## What is Transdermal Water Loss (TEWL)?

Transdermal Water Loss (TEWL) is the measurement of the amount of water that passively evaporates from the skin into the surrounding air. It's one of the most widely used indicators of skin barrier function.

- When the skin barrier is **healthy**, TEWL is low and water is retained.
- When the barrier is **compromised** (e.g. irritation, damage, dryness), TEWL increases and more water escapes.

That's why TEWL is heavily used in:

- Dermatology (eczema, dermatitis, wound healing)
- Cosmetic testing (efficacy of moisturizers, barrier creams)
- Clinical research (skin integrity and repair)

## VapoMeter® (VX): A New Platform for TEWL Measurement

The new VapoMeter® (VX) is not an evolution of the VapoMeter® SWL5, but a completely new Instrument **engineered entirely from the ground up** offering key innovations.

Built with **new high-performance electronic components**, it integrates advanced features and a **more powerful operating system** that enables faster updates and continuous improvements.

Its built-in connectivity ensures seamless access to new functionalities, while **Bluetooth** allows for **effortless data transfer**.

Designed for real-world clinical use, the device is **waterproof-optimized** and can be safely cleaned with wipes, for example, without any risk of liquid ingress.

Its high precision is driven by both the superior quality of its components and a **newly developed calibration method**, ensuring reliable and consistent measurements.

Additionally, it has been designed with sustainability in mind, supporting corporate ESG goals through durable construction, reduced electronic waste, and energy-efficient operation.

## Introducing **the VapoMeter® (VX): Smarter, Sleeker, More Accurate**

The VapoMeter® (VX) sets a new standard in TEWL measurement with its **ergonomic design** and intuitive operation.

Built to guide users at every step, it features **intelligent prompts and error-prevention mechanisms** to ensure reliable results.

Its **single-interface configuration** simplifies workflow, while a **dedicated sensor check procedure** maintains optimal performance.

Combined with **enhanced measurement accuracy**, it delivers precise, consistent readings, making high-quality skin barrier assessment faster, easier, and more dependable than ever.



## Smart Ergonomic Design

The VapoMeter® (VX) features a carefully engineered ergonomic design, created to maximize user convenience during every measurement.

Its shape and weight distribution make it comfortable to hold, whether you are right- or left-handed, ensuring **effortless handling in any clinical setting.**

The Instrument also incorporates a **wider, optimally positioned screen**, providing **clear, easy-to-read visuals** that guide the user through measurements and display results intuitively.

Adding to its practicality, it comes with a wireless charging station, allowing users to safely set down the instrument when not in use while keeping it fully charged and ready.

This thoughtful combination of grip comfort and screen visibility enhances efficiency, reduces fatigue, and ensures a smooth, user-friendly experience.



## Your Intuitive Measurement Assistant

The VapoMeter® (VX) now features an intelligent guidance and error prevention system designed to make measurements more intuitive, reliable, and efficient.

The Instrument provides natural, step-by-step instructions that guide users through each measurement, helping to prevent errors and ensuring that all procedural steps are correctly followed.

This not only minimizes operator mistakes but also enhances inter-operator repeatability, which is essential for clinical studies and multi-user environments.

Accuracy and reproducibility are further improved thanks to a stricter zero reference calibration, ensuring that each measurement is precise and consistent regardless of who performs it.

By combining these safeguards with real-time guidance, the VapoMeter® (VX) makes the measurement process smoother and more fluid, reducing the need for repeated attempts and saving valuable time.

In practice, this means clinicians and researchers can rely on the Instrument to deliver correct results every time, with less training required and greater confidence in the data.

The outcome is a significant gain in both time and precision, making the workflow faster, more reliable, and more user-friendly.



Elevate your research



**No start-up  
time required**



**Ready to  
measure  
instantly,**



**every time.**

## Single-Interface Configuration

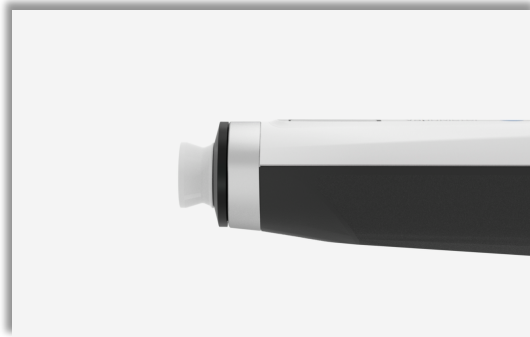
The VapoMeter® (VX) introduces a **completely redesigned, unique adapter** that is essential for performing precise TEWL measurements.

This adapter has been meticulously engineered with an improved shape that allows it to fit perfectly into the probe, ensuring a secure and stable connection. Its design also provides enhanced protection for the closed-chamber measurement, minimizing the risk of disturbances or environmental interference during readings.

By optimizing both the fit and the chamber integrity, the adapter significantly improves the accuracy and stability of TEWL measurements.

Users benefit from more reliable, reproducible results across different operators and sessions, reducing variability and increasing confidence in their data.

This careful engineering elevates a key component ensuring it delivers precise, more consistent and stable measurements.



## Integrated Sensor-Check for Reliable Performance

The VapoMeter® (VX) features an integrated sensor-check procedure that allows users to quickly and easily verify the Instrument's performance before starting any study.

This built-in verification system ensures that all sensors are functioning correctly and that the device is fully ready, giving operators confidence that measurements will be accurate and reliable from the very first use.

By performing a routine sensor check, potential issues can be identified and addressed proactively, minimizing the risk of errors or inconsistent data during critical experiments or clinical studies.

This feature not only reinforces measurement integrity but also streamlines workflow, providing a fast, practical, and reassuring way to ensure the Instrument is always performing at its best.

**Easy to Use. Fast to  
Learn. Designed for  
Science.**

*Skin Measurement devices that  
advance skin science*



## Same Validated Optimized Principle

The VapoMeter® (VX) builds on the same scientifically validated measurement method that has already proven its reliability over time.

Rather than changing the principle, it has been carefully optimized to further enhance precision, speed, and overall performance.

A key advancement is the integration of an improved measurement approach combining 3 readings with an advanced calculation algorithm, resulting in a **25% increase in measurement precision.**

This ensures full continuity for users and studies, while delivering a significant step forward in data quality.

### — Optimized Closed Chamber —

The size of the closed chamber has been revised to significantly improve measurement performance.

Its enhanced structure offers greater protection against external disturbances, making measurements less sensitive to ambient airflows such as breathing or air conditioning.

This results in more stable conditions within the chamber and, ultimately, more accurate and reproducible TEWL values.

### — Expanded Measurement Range —

The VapoMeter® (VX) extends the measurable range from up to 200 g/m<sup>2</sup>h to now up to 300 g/m<sup>2</sup>h.

This wider range allows for greater flexibility across a broader variety of skin conditions and applications, ensuring reliable measurements, even in cases of high TEWL.

### — Fast Measurement Time —

Despite the improvements in precision, measurement time remains fast and efficient, ranging from **7 to 12 seconds depending on the Relative Humidity of the skin area.**

This balance of speed and accuracy supports both clinical workflows and research protocols, saving time without compromising data quality.

### — Enhanced Orientation-Free Use —

Like all Delfin instruments, the VapoMeter® (VX) remains **fully orientation-free, allowing measurements to be taken at any angle and on any part of the body.**

This capability is further enhanced by the **new display design, which improves readability and ease of use regardless of positioning, ensuring greater comfort for both the user and the patient.**

### — Integrated Skin Temperature Measurement —

The VapoMeter® (VX) now incorporates a **built-in infrared skin temperature sensor, enabling the device to measure not only TEWL but also skin temperature simultaneously.**

**Skin Temperature is captured at the exact point of contact, unlike other devices on the market.**

This synchronization is critical, as consistent environmental and physiological conditions are essential for obtaining reliable and robust results.

By integrating skin temperature directly into the measurement process, the VapoMeter® (VX) significantly enhances result accuracy and consistency, providing users with greater confidence in their data and a more comprehensive understanding of skin physiology.

## Enhanced Calibration, Elevated Performance

The enhanced accuracy, repeatability, core performance, usability, and overall control offered by the VapoMeter® (VX) are not only the result of its high-quality components, but also of a newly improved calibration approach.

The Instrument now features an optimized yearly calibration method designed to be faster, more efficient, and more reliable.

This updated process includes automatic pairing between the sensor and the instrument, eliminating manual steps and reducing the risk of user error.

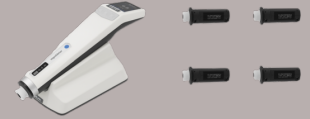
By ensuring a seamless connection, it maintains optimal measurement performance with minimal intervention.

Calibration can be performed at the user's discretion or handled by us upon request.

In addition, the calibration workflow has been streamlined to save time, making routine maintenance easier and less disruptive to daily operations.

To further enhance ease of use, the VapoMeter® (VX) incorporates an intelligent reminder system: users no longer need to track calibration schedules manually. When the time for yearly calibration approaches, an on-screen prompt clearly indicates that calibration is required. This proactive notification ensures the device remains compliant and consistently accurate, without relying on user memory.

Together, these improvements reinforce long-term measurement reliability while simplifying maintenance, allowing users to focus on their work with full confidence in the Instrument's performance.



### VapoMeter® vs. VapoMeter® (VX): Key Differences at a Glance

Category	Feature	VapoMeter®	VapoMeter®(VX)
Core Performance	Closed-chamber technology	✓	✓
	Measurement time	7-12 sec	
	Measurement range	Up to 200 g/m <sup>2</sup> h	Up to 300 g/m <sup>2</sup> h
	Orientation free/anywhere measurement	✓	✓
Usability	Portable	✓	✓
	Wireless charging station	✗	✓
	Wireless connectivity	✓	✓
	Bluetooth & Wi-Fi connectivity	✗	✓
	Ergonomic design & optimized display	✗	✓
	Built-in skin temperature sensor	✗	✓
	User guidance & error prevention	✗	✓
	Single-Interface Configuration	✗	✓
Accuracy & Control	Measurement precision	—	+25%
	Repeatability	Standard	Improved
	Sensor check procedure	✗	✓
	Calibration process	Standard Every 2 years	Faster/More accurate Every year
	Scientifically validated	✓	✓
	Delivered with a certificate of calibration	✓	✓
	2-year warranty	✓	✓

Interested in advancing your clinical or research practice with cutting-edge measurement technology?

Explore the full range of Delfin Instruments and join the global community driving skin science forward.

Join us!