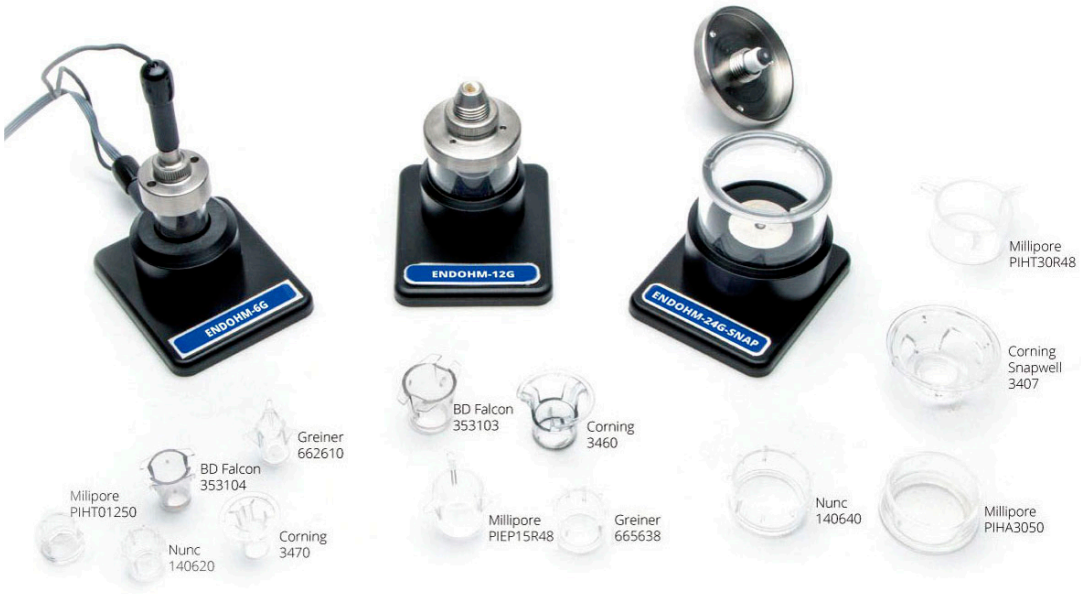
SELL SHEET

Endohm Chambers

Reproducible TEER Measurements of Epithelial & Endothelial Tissue Resistance



Using WPI's EVOM™ Manual resistance meter, Endohm chambers provide reproducible resistance measurements of endothelial and epithelial monolayers in culture cups. Transfer cups from their culture wells to the Endohm chamber for measurement rather than using chopstick electrodes in sample plates.

Make More Precise Measurements with Endohms

Endohm's symmetrically opposing circular disc electrodes, situated above and beneath the membrane, allow a more uniform current density to flow across the membrane than with electrodes. The background resistance of a blank insert is reduced from 150 Ω (when using WPI's hand-held electrodes) to less than 5 Ω. With Endohm's fixed electrode geometry, variation of readings on a given sample is reduced from 10-30 Ω with electrodes to 1-2 Ω. Compared with other resistance measurement methods, Endohm with EVOM™ Manual offers a much more convenient and economic solution to "leaky tissue" measurement. Because of the uniform density of the AC square wave current from EVOM™ Manual, errors owing to electrode polarization or membrane capacitance are largely negated. Endohm together with EVOM™ Manual offers the most accurate and economical endothelial ohmmeter now available. To date, cups from Corning, Millipore, Nunc, Greiner, and BD Falcon have been tested. Endohm chambers may be sterilized with EtO, alcohol, or a bactericide; not autoclavable.

Note that EndOhm chambers may not be suited for continuous measurements for extended periods of time since the EndOhm chamber electrodess are silver/silver chloride-based and may show potential cytotoxic effects during long term exposure.

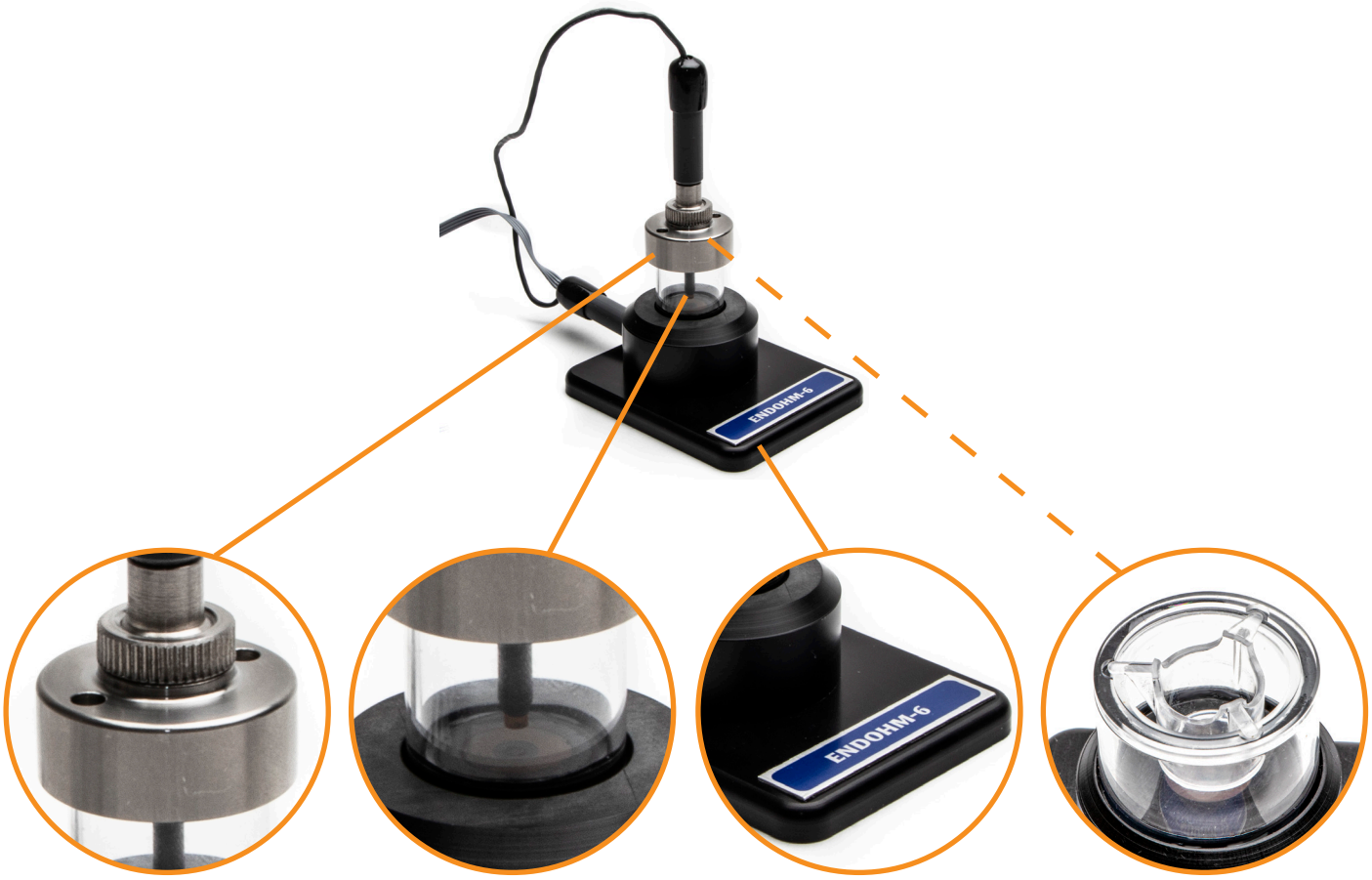
Resistance values obtained with the Endohm are consistent with those obtained using a well-designed Ussing Chamber. Options include:

- EVM-EL-03-01-01 (ENDOHM-6G) Chamber for 6 mm culture cup, 15.8 mm ID (24 wells per plate)
- EVM-EL-03-01-02 (ENDOHM-12G) Chamber for 12 mm culture cup, 23.2 mm ID (12 wells per plate)
- EVM-EL-03-01-03 (ENDOHM-24G-SNAP) Chamber for 24 mm and COSTAR Snapwell™ culture cup, 37.3 mm ID (6 wells per plate)

The chamber and the cap each contain a pair of concentric electrodes: a voltage-sensing silver/silver chloride pellet in the center plus an annular current electrode. Current flows between these symmetrically opposing circular disc electrodes. This design provides several advantages:

- Current density across the membrane is more uniform with Endohm's circular disc current electrodes than with the STX4 electrodes.
- Most importantly, with Endohm's fixed electrode geometry, variation between successive resistance measurements of the same sample is only 1–2Ω.

STABLE, REPRODUCIBLE READINGS



Symmetrical electrode pattern

Glass chamber

6, 12, and 24 Well plate inserts

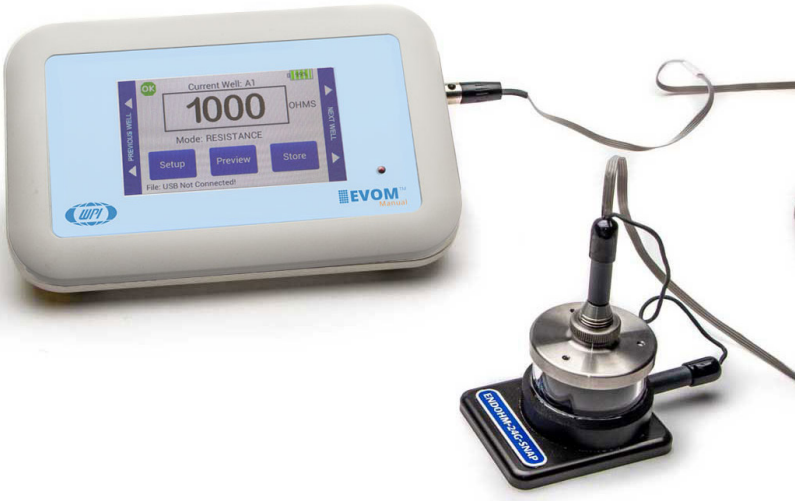
120º Tri-supports

Benefits

- Stability and reproducibility superior to the **STX4** electrodes to 1% tolerance
- Three sizes can be used with 6, 12 or 24 well plates with removable inserts and cover a range of well cup sizes from a variety of manufacturers
- The new Endohm chamber upper mount is made of polycarbonate and unaffected by alcohol
- The height of the top electrode can be adjusted to fit cell culture cups of different manufacturers
- Crystal clear glass chamber allows visualization of apical electrode positioning and is easier to clean and more scratch resistant than the prior versions
- New insert holder with 120º tri-supports for three leg inserts offer mechanical stability and holds the membrane parallel to the electrodes
- Symmetrical electrode pattern disperses test current uniformly
- Compatible with **EVOM™ Manual**

Applications

- TEER measurement for removable culture cup systems using **EVOM™ Manual** meters for endothelial and epithelial cell cultures



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