Flocel

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TEER Measurement System

The **T**rans**E**pithelial **E**lectrical **R**esistance (TEER) measurement provides a quick and easy evaluation of the integrity of the Blood-Brain Barrier model. The DIV-BBB model has a TEER closer to that found in vivo, >1000 Ω-cm^2 as opposed to the monolayer model that typically achieves a TEER of 200 Ω-cm^2.

Features:

- Impedance measurement at multiple frequencies.
- Low voltages, 60 millivolts maximum.
- Automatic multiplexing of multiple cartridges.
- Two versions, PCI card or PCMCIA card.

Benefits:

- Characterize the resistance and capacitance of the barrier.
- Limits potentially damaging voltages to the barrier.
- Can handle up to 4 cartridges simultaneously.
- Can use either a desktop or laptop PC.

Computer System Requirements

- IBM compatible computer, 400 MHz or faster
- Windows 98SE or higher
- 128 MB RAM (256 MB recommended)
- CD-ROM drive for installation
- One free USB port

The TEER Measurement System is sold with the measurement software, the required cable, and a mounting platform that can accommodate four DIV-BBB cartridges. The electrodes in the cartridge plug into the mating connectors in the platform. The system is shipped with four cartridges for initial evaluation.

Cartridge Specifications:

Hydrophobic capillaries	Accurel® PP Q3/2 (optionally pre-coated with ProNectin® F or Poly-D-Lysine)
Trans-capillary pore size	nominal 0.2 µm
Number of hollow fibers	19
Total lumen internal volume	0.0123 in^3 = 0.202 cm^3
Total lumen internal surface area	2.09 in^2 = 13.5 cm^2
Volume of extralumenial space (ECS)	0.070 in^3 = 1.15 cm^3
Total hollow fiber area in ECS	3.50 in^2 = 22.6 cm^2

Cartridges are delivered in a sealed bag, sterile and wetted with distilled water.

Measurement Software - LabVIEW Application Program

The Measurement Software has been written as a stand-alone program based on LabVIEW. The User Interface, known as the Front Panel in LabVIEW, allows the researcher to apply a sine wave to the intrapithelial resistance barrier, measure and record data.

Ordering Information

TEER Measurement System	$2495
Measurement Software	$2495
USB Cable	$ 25

Preliminary - Specifications subject to change