



Ussing Chamber System  
Millicell 12 mm Cup Cartridge Insert  
Model U9924M-C12

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## DESCRIPTION

The **U9924M-C12** Cartridge Insert is designed to allow the rapid and simple placement of 12 mm Millicell culture cups into the **U-9926**, **U-2500** and **U-5000** Ussing chamber systems from Warner Instruments.

## PREPARING THE U9924M-C12 CARTRIDGE INSERT

1. Prior to use, clean the insert using the same procedures as suggested for the chamber half-cells.
2. Place the female half-cell (the side without the pins) on the table with the larger opening facing up. Place the Millicell culture cup into the opening, culture side down.
3. Place a #013 O-ring around the outside of the culture cup. A slight stretch of the O-ring is necessary since the O-ring ID is slightly smaller than the culture cup OD.
4. Complete the insert assembly by pressing the male half-cell into place.
5. Place the cartridge insert into the slot of the partially assembled Ussing chamber. (See the instructions that came with your Ussing Chamber setup for specific assembly considerations.)

**NOTE:** Be sure that the half-cells are parted sufficiently to allow insertion of the cartridge without disrupting of the larger O-rings in the chamber half-cells. Observe that the O-rings within each half-cell are properly positioned.

6. Insert all cartridges before tightening the half-cell clamping screws. Slowly tighten the screws to insure proper sealing of the O-rings. When fully tightened, the spaces on either side of the half-cell assembly should be nearly identical.

**CAUTION:** The orientation of the membrane (in the culture cup) in a properly assembled cartridge insert is **offset from the center of the cartridge assembly**. When placing the cartridge insert into the chamber assembly, note to which side the offset is oriented. You must use the supplied shortened bridge fittings for the voltage electrode on this side or the membrane will be punctured. You may safely use the longer fittings on the opposite side of the cartridge assembly.