

## • SKIN PERMEATION - INLINE DIFFUSION CELL

In-Line Cells are flow cells available in orifice diameters from 3mm to 15mm which were designed to replace the Bronaugh Cell. They are made from the plastic Kel-F which is the 3M product or Neoflon which is the Daikin product.

In-Line Cells have a unique clamping system which features user preset, repeatable, secure clamping of tissue or membranes. Clamping is achieved with a stainless steel spring that applies pressure preset by the user to the upper surface of the donor compartment for leakproof clamping. The cell design locates the orifice diameters within .1mm of each other.

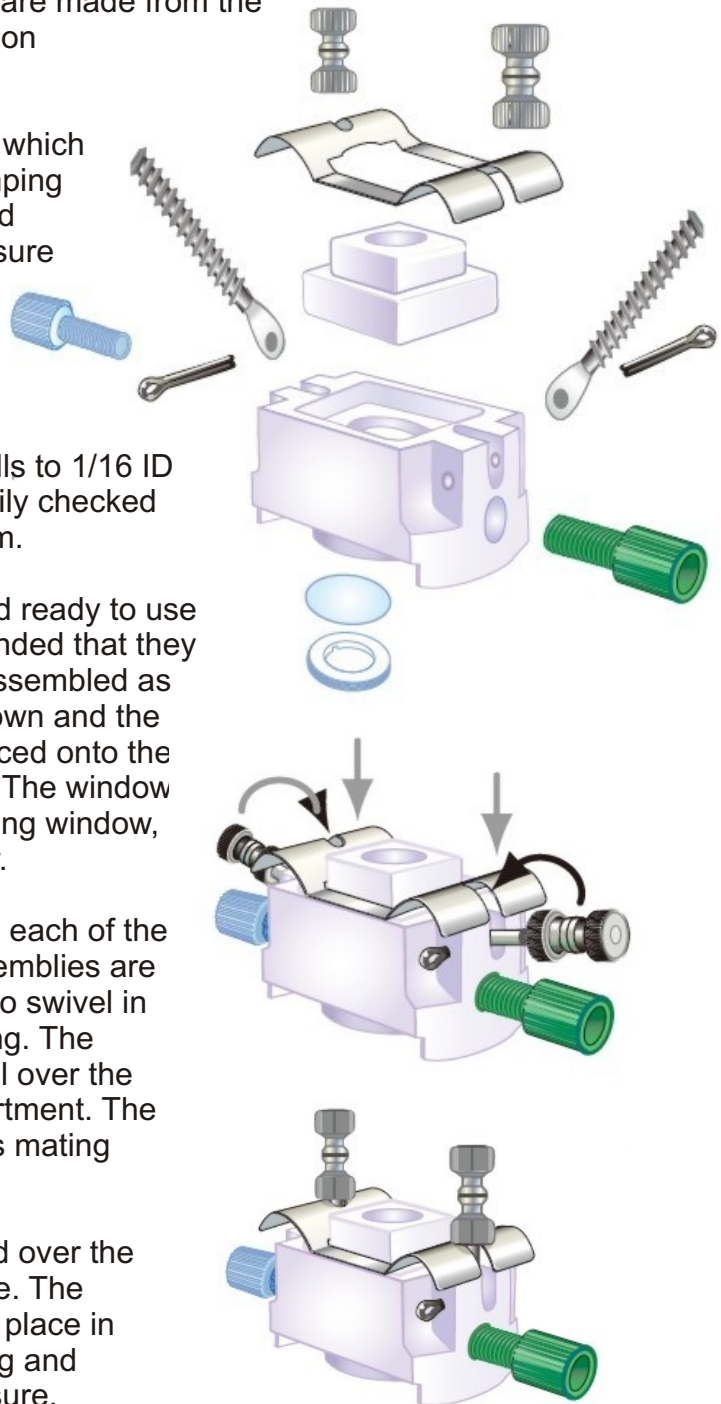
HPLC connectors are used to connect the cells to 1/16 ID tubing. Stirring effects within the cells are easily checked with our unique Twin-Flow Conversion System.

In-Line Cells come completely assembled and ready to use except for sterilizing. After use, it is recommended that they be disassembled and cleaned. They are re-assembled as follows: The body of the cell is held upside-down and the glass or polycarbonate viewing window is placed onto the sealing surface of the receptor compartment. The window locknut is screwed in snugly against the viewing window, overly tightening this locknut is not necessary.

The cell is placed on a horizontal surface and each of the adjusting screw and pressure setting nut assemblies are replaced with the cotter pins that allow them to swivel in and out of the slots in the stainless steel spring. The membrane to be used is placed inside the cell over the orifice which is the top of the receptor compartment. The donor compartment is lowered down within its mating cavity until it rests on top of the membrane.

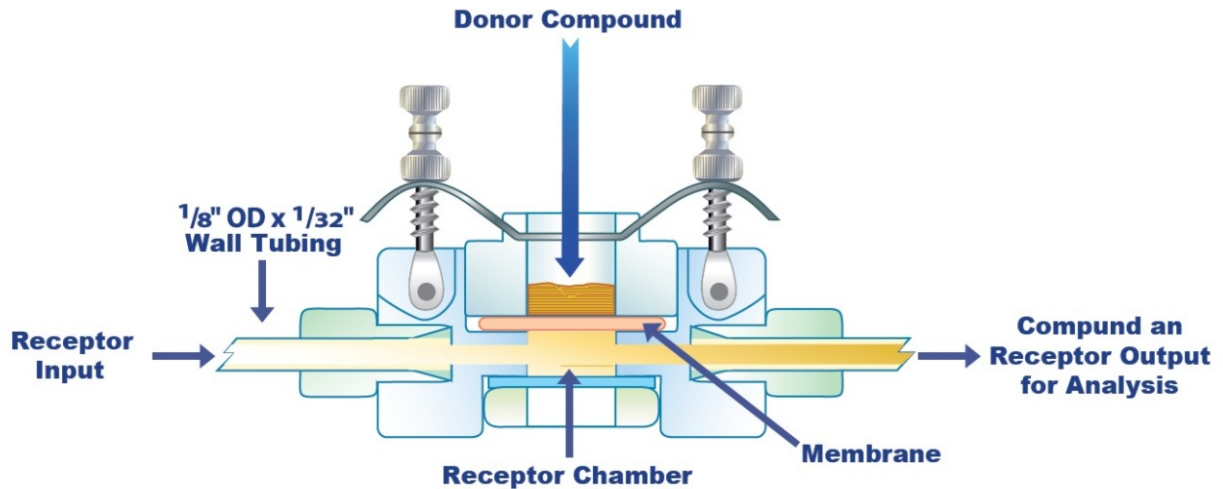
The stainless steel clamping spring is lowered over the donor compartment onto the clamping surface. The adjusting screw assemblies are swiveled into place in the slots of the spring and the pressure setting and locking nuts are adjusted to the desired pressure.

Connectors are installed with tubing into the 1/4-28 HPLC inlet and outlet ports and the cell is placed in a Cell Warmer to be brought up to temperature.



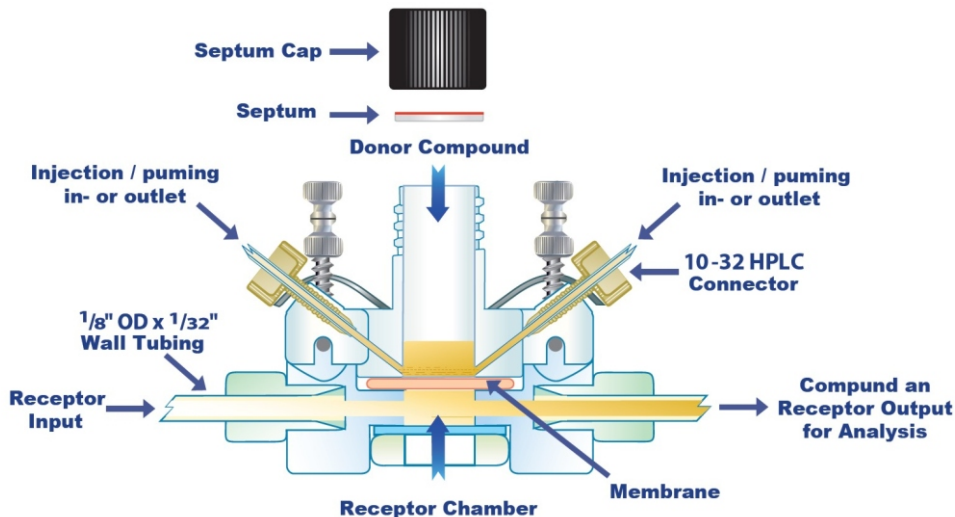
## • STANDARD INLINE CELL

Pictured below is a cross-sectional view of an In-Line Cell with HPLC fittings and sections of inlet and outlet tubing included. The HPLC ports in standard In-Line Cells are threaded for standard 1/4"-28 connectors such as those sold by us. We also supply In-Line Cells with #10-32 threaded connections upon request. The In-Line Cell maybe thought of as a flow type Franz Cell with a very small receptor volume. In-Line Cells locate the membrane of interest in the horizontal plane and have donor chambers open to the air although occluded donor chambers are available.



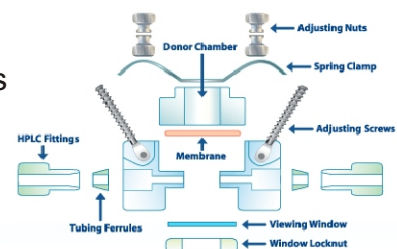
## • DUAL FLOW CELL

In addition to the standard cells of the above, we made a inline cell with a donor chamber with injection in- and outlet. So now it is possible to take or replace liquids / gas at the same time. We also supply cell of dual-flow type, such as: equipped with a line-injectable possible to extract liquid / gas.



### Full automated System:

- include Fraction Collector for Inline Cells
- Cell Warmer / for 7 Inline Cells
- Thermostat / Heater
- Media Replacement with Manifold
- Peristaltic Pump 8-Chanel



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