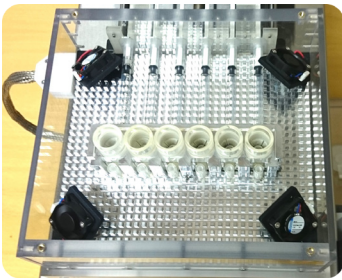


PermeaSys

Microfluidic *in vitro* system for dynamic tissue and cell studies

Product

Dynamic flow, temperature, and pH that mimic *in vivo* conditions are the key components of modern *in vitro* tissue and cell studies, such as molecule permeability and safety experiments. PermeaSys is a novel microfluidic platform enabling physiologically relevant experiments with minimal membrane and molecule consumption. One PermeaSys environment module loaded with disposable components allows six parallel experiments in locally controlled *in vivo* conditions.

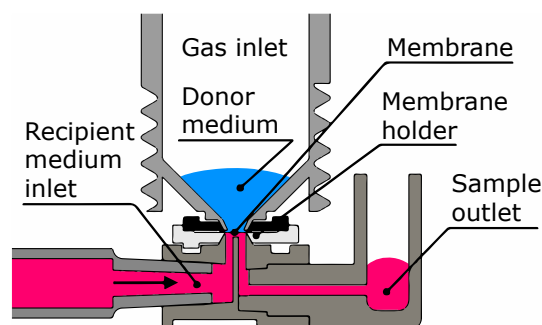


Benefits

- Any membranes can be studied, such as cultivated cell membranes, biopsy samples and artificial membranes.
- Physiologically relevant molecule concentrations can be studied.
- Membrane and molecule consumption is kept in minimum, since recipient medium volume contacting membrane is only $\sim 1 \mu\text{l}$ and exposed membrane surface diameter is 2 mm (thickness up to 2 mm). Donor medium volume can be between 10 and 1000 μl .
- Diffusion layer beneath the membrane is removed due to flow of recipient medium. Flow rate of the medium is controllable.
- Cross-contamination is eliminated due to disposable components.
- Tabletop sized system saves space.

Applications

- ADMET
- Skin testing
- Chemical safety testing
- Perfusion based cell assays



Schematic presentation
of disposable components