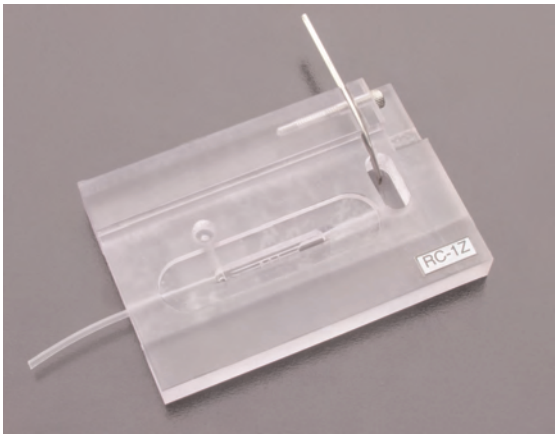
WARNER INSTRUMENTS

INSTRUCTIONS FOR OOCYTE CHAMBER RC-1Z



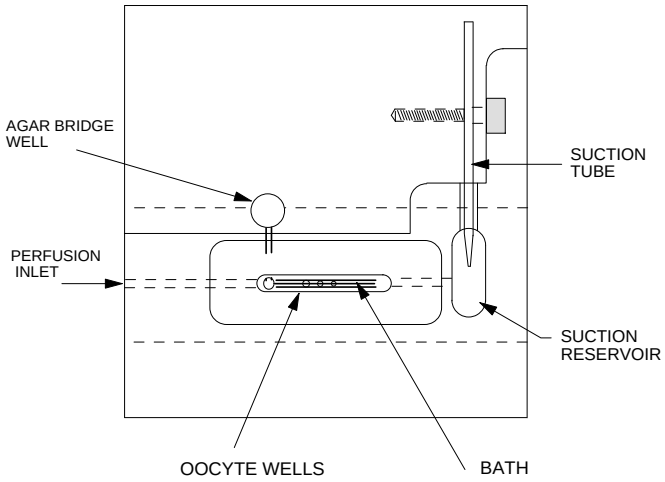
Model RC-1Z is a simple, low cost perfusion chamber for oocyte studies. It features a slot shaped bath for applications requiring rapid perfusion.

To aid in holding the oocyte in position, the chamber bottom has three dimples with diameters of 0.8, 0.9, and 1.0 mm. Three slots milled into the chamber bottom perpendicular to the direction of solution flow aid in bathing the bottom side of the oocyte.

The perfusion input accepts standard 1/16" OD (PE-160) polyethylene tubing. Solutions are removed from the suction well via an adjustable suction tube. Solution height is adjusted by raising or lowering the suction tube.

An agar bridge well with connecting channel to the input side of the bath is provided for making bridge connections to the bath.

TOP VIEW OF RC-1Z

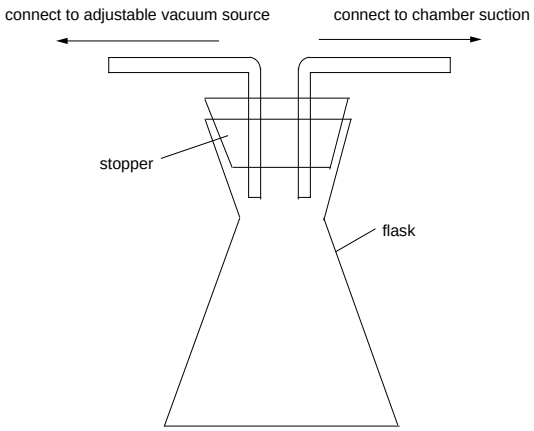


Specifications

Material:	Polycarbonate
Footprint (L x W):	7.7 cm x 5.1 cm
Bath Dimensions:	25 mm L x 3.5 mm W x 2.5 mm H
Approx. Volume:	85 µl/mm height
Chamber Floor Insert:	25 mm x 75 mm x 3 mm polycarbonate
Input Tubing:	1/16" OD (PE-160)
Output Tubing	1/16" ID

Using the Chamber

Connect the perfusion input tubing to the bath well input port.
Connect a length of 1/16" ID tubing to the suction tube and connect the outboard end to a vacuum source (see sketch below for a suggested method). Turn on the perfusion and adjust the vacuum to a level that removes the perfusate without inducing tidal fluctuations in the bath. (This adjustment can be difficult. Too strong a vacuum can suck the bath dry or cause fluctuations in the bath height.) A properly adjusted vacuum will keep up with the input flow while the suction tube end is partially submerged. This configuration will allow the suction tube to simultaneously draw both solution and air. Once the suction rate is properly adjusted, the solution height in the bath can be set by moving the suction tube end up or down.



Suggested vacuum connection for chamber suction.

Chamber Grounding

A ground reference electrode or chlorided silver wire can be placed either directly in the bath or in the adjacent suction well. The agar bridge should be filled by heating a mixture of 3-5% agar with 1M KCl (w/v) until the solution bubbles clear. While still hot, pour the agar into the agar bridge well until it is flush with the bottom of chamber bath. Since Polycarbonate is opaque, it may be helpful to add a dye such as (methylene blue) to the agar / KCl solution. In this manner any discontinuity in the agar lead (break in the agar or an air bubble) can be easily visualized.

Maintenance
The chamber may be cleaned with ordinary laboratory detergents. It may also be sterilized by autoclaving. To remove agar gel, remove Scotch tape covering the agar bridge channel, after cleaning and drying the chamber simply replace tape.

NOTE:
DO NOT USE ALCOHOL TO CLEAN THE CHAMBER.