

Mini-Chamber for Regulating Gaseous Environment during Culture

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A simple and inexpensive chamber for regulating gaseous environment of small culture plates, such as those used for culture of preimplantation embryos, can be constructed using disposable media-filtration devices such as Corning's 115-ml system. The following is a description of how to make such a device.

Click here to see a paper published using this device for culture of bovine preimplantation bovine embryos (under construction)

1. The basic unit is constructed from a media filtration unit such as [Corning's](#) 115 ml filter system (catalog numbers 430944-430947).
2. Tygon tubing (3.2 mm i.d. x 6.4 mm o.d.) with a stopcock fastened to the end is attached to the hose connector.
3. A 00 size rubber stopper is inserted into the pour spout of the filter system.
4. The membrane in the filter system is punctured in several places to facilitate movement of gases.
5. Culture plates (up to a 60 mm petri dish plate) are gently positioned on top of the membrane. If the plate is large, it is difficult to maneuver the plate into the chamber with fingers. In this case, a cradle underneath the plate can be constructed with tape to facilitate placement of the dish.
6. The lid of the filter system is taped securely with scotch tape and parafilm is placed around the lid to make the chamber airtight.
7. Gases are injected for 3 min through the pour spout from a hose connected to the gas cylinder while the stopcock was in the open position.
8. After injection of gases is completed, the rubber stopper is fastened to the pour spout and the stopcock is moved to the closed position.
9. To prevent contamination during injection of gases, a filter (0.22 µm) is attached to the gas hose.



Photograph of assembled chamber

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created 8-14-00