



Directions For Use:

BioCoupler™

Product Summary

The patent-pending BioCoupler™ with the addition of a pair of inexpensive glass jars having an industry standard 70-450 finish neck (regular “Mason” jars), creates a Temporary Immersion Bioreactor for rapid, easy, aseptic liquid medium plant tissue culture that can be easily autoclaved at the standard 121C for 20 minutes or longer.

BioCoupler™ has a unique adjustable vane to control liquid flow and for helping to prevent small propagules from passing through. It also mixes and aerates the medium! The special shape of the holes allow easy fluid flow while reducing “air-lock” and blocking propagule passage. A user-replaceable micro-porous vent filter allows pressure equalization to atmospheric pressure and helps to prevent contamination.

How to Use

1. The glass vessels, BioCoupler™, and MS liquid medium with recommended Plant Preservative Mixture (PPM) from Plant Cell Technology are autoclaved. The vessels should be a loose fit to the BioCoupler™ during autoclaving. The couplers and vessels may be autoclaved separately if desired.
2. Remove the top vessel and place the sanitized plant material. Couple to the lower vessel containing the liquid medium. Hand tighten only. They have soft silicone gaskets.
3. Tape around the coupler edges to the glass with vinyl electrical tape such as Scotch™ 3M brand. This type of tape is rated for a continuous 105C temperature for electrical applications and can easily withstand 121C autoclaving. The entire roll can be autoclaved allowing the user to apply sterilized tape as needed! Any of the colors (other than black) work well and can be used for identification purposes by color and marking with a Sharpie pen.
4. The bioreactor is tilted as needed, once a day, or maybe just once a week, depending on the plant and speed of growth. Keeping the filter up* slowly tilt the bioreactor. This can be a complete 180 degrees turn or less. All that is needed is to transfer the liquid to the propagules then return it to the medium vessel. This takes about 20 seconds to accomplish. This is a good time to take a look at the progress too!

www.plantcelltechnology.com



202-621-5490



1601 Connecticut Ave NW suite 400
Washington DC, 20009



Additional Details

- **IMPORTANT:** Keep the liquid medium from coming in direct contact with the vent filter hole by keeping the vent filter in an upright position while tilting. This can prevent clogging of the vent hole and filter while also reducing any risk of leakage or contamination. Proper handling allows the filter to be used multiple times. They can be easily and economically replaced by the user.
- Liquid medium does not necessitate frequent re-plating of tissue. It can last for months in a culture.
- It is very easy to replace the medium if desired. Simply remove the lower tape, unscrew the lower medium vessel, replace with a new vessel of medium and re-tape. The tape blocks airborne contamination particles from the outside mouth and screw threads of the vessels and coupler.
- BioCoupler™ can be used over and over. Cleaning is easy. Replace the vent filter as needed.
- Whether for research, education, or commercial production, you are now doing “Temporary Immersion Bioreactor Plant Tissue Culture” in the most economical, efficient, easiest way possible!

www.plantcelltechnology.com



202-621-5490



1601 Connecticut Ave NW suite 400
Washington DC, 20009

