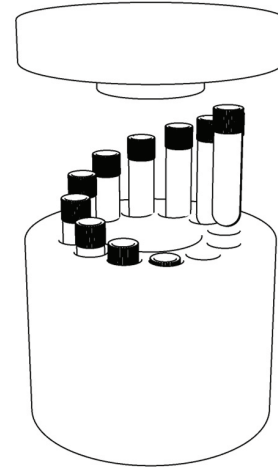


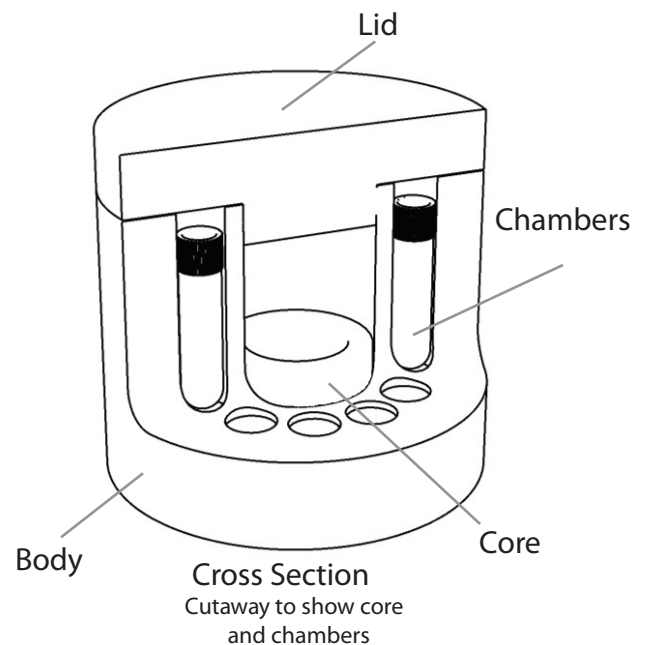
Quick start

- The 12 chambers and sample tubes should be dry to avoid tube sticking upon freezing.
- Make sure the core (black ring) is at room temperature and seated in the bottom of the central cavity.
- Place sample vials containing 1ml of cell suspension in each well. The sample vials should not extend above the CoolCell body.
- Check that the tubes slide in and out freely.
- Fully seat the lid on the CoolCell.
- Put the CoolCell upright into a -75°C freezer or dry ice locker. Ensure that there is at least 1 inch of free space clearance around the CoolCell.
- Freeze for 4 hours before transferring samples to archive storage.



Transferring frozen samples to archive storage

- Prepare an insulated pan or container with a 1 inch (2.5 cm) layer of pulverized or pellet dry ice.
- Remove the CoolCell from the freezer and gently remove the lid using a twisting and rocking motion.
- Immediately invert the CoolCell over the dry ice to recover the frozen vials. Check the CoolCell vial chambers to ensure that all chambers are clear. If any vials have stuck, release the vials by tapping the inverted CoolCell on a flat surface or on the palm of your hand.



SPECIAL NOTES:

- Always use dry ice to transfer the cells to permanent storage to avoid temperature rise and cell damage. Cryovial contents can rise from -75°C to over -50°C in less a minute if exposed to room temperature air.
- It is strongly recommended that all frozen cell cultures be checked for viability before the stock culture is terminated.

Recycling the CoolCell to room temperature.

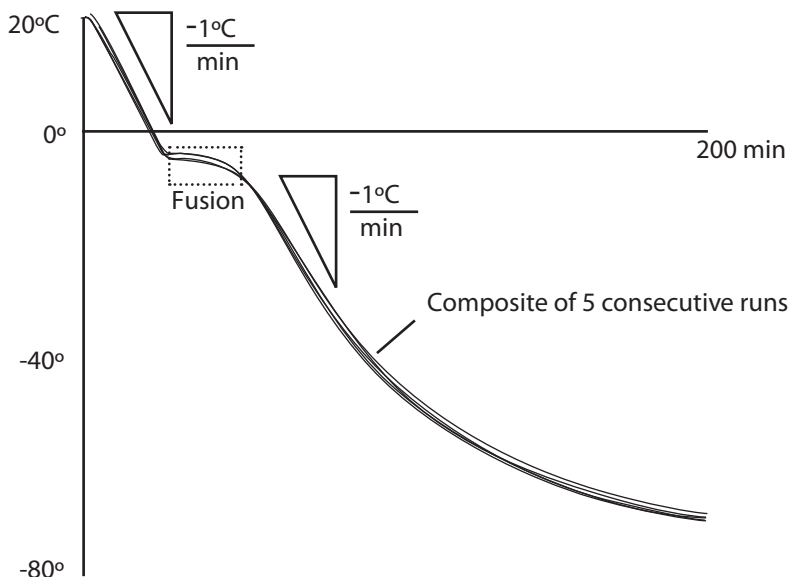
The CoolCell is ready to freeze again as soon as the core (black ring) is at room temperature. To rapidly recycle the CoolCell to room temperature, remove the center solid core ring by inverting and tapping on a surface. The CoolCell body and lid will return to room temperature in 10 to 15 minutes. Check that all chambers are dry. Dry the core (black ring) before re-inserting into the central chamber.

About the CoolCell

The CoolCell, in combination with a -75°C freezer or dry ice locker, will provide the freezing rate of -1 degree per minute that is ideal for cryo-preservation of most cultured cell lines. The CoolCell design uses a combination of insulation foam, radial symmetry, and a heat transfer core to regulate heat loss rather than using a large thermal mass (alcohol based freezer). As a result, freezing profiles are extremely consistent from one run to the next. Also, because of this low thermal mass, the CoolCell will not cause a rise in local freezer temperature and will protect nearby samples already stored in the freezer. Low thermal mass also means the CoolCell will rapidly return to room temperature for another freezing cycle (see fast recycle instructions above). The CoolCell may be used with a wide variety of commercially available cryogenic storage vials.

Cell freezing performance

The CoolCell will freeze 12 tubes each containing 1ml of cell suspension at -1°C per minute when placed in a -75°C environment (mechanical freezer or dry ice locker). The five consecutive run freezing profile curves at right were performed with 12 sample loads each.



Troubleshooting

Problem	Solution
Vials do not freely fit in the chambers	The CoolCell is designed to fit standard screw-top 2ml cryovials up to 13mm in diameter and up to 55mm in height. Check that flag style labels, if used, will not bind and hinder removal
Vials are stuck in CoolCell after freezing	The most likely problem is moisture in the vial chambers or on the sample vial prior to freezing. Remove the core (black ring) and tap the CoolCell inverted into your hand or into the vial receiving pan to dislodge samples.
The lid does not fully seat	Ensure that sample tubes are below the chamber surface. The maximum height of the tube is 55mm.

Care and Cleaning

The CoolCell is constructed of closed cell crosslinked polyethylene foam and a solid thermoconductive core. The CoolCell is compatible with prolonged cryogenic temperature exposure. The foam may be cleaned by water and mild soap. Rinse and dry thoroughly. The CoolCell is resistant to alcohols and 10% bleach solutions. Do not autoclave. Maximum temperature exposure: 60°C. Avoid prolonged exposure to UV light sources.

www.capitalbiosciences.com

9700 Great Seneca Hwy Rockville, MD 20850 Tel: 1-800-475-2812 Fax: 240-363-0739 Email: info@capitalbiosciences.com