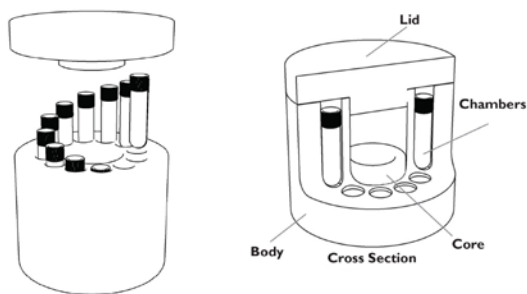


## Corning® CoolCell® Freezing Container

### Instructions for Use



#### Quick Start

- ▶ The 12 chambers and the cryogenic vials should be dry to prevent the tubes from sticking upon freezing.
- ▶ Make sure the Core (black ring) is at room temperature and seated in the bottom of the central cavity.
- ▶ Place the sample vials containing 1.0 mL of cell suspension in each well. Each well should contain a filled vial. If the freezing batch is fewer than 12 vials, fill each empty well with a Corning CoolCell Filler Vial (2 mL, Corning Cat. No. 432076) or other vial that contains equivalent volume of freezing media.
- ▶ **Note:** Cell suspensions can be inserted into a room temperature CoolCell container and successfully preserved. For optimal results, the CoolCell container should be at the same temperature as your cell suspensions.
- ▶ Check that the tubes slide in and out freely.
- ▶ Fully seat the lid on the CoolCell container.
- ▶ Place the CoolCell container upright into a -80°C freezer or dry ice locker. Ensure that there is at least one inch of free space clearance around the CoolCell container.
- ▶ Freeze for a minimum of 4 hours before transferring the samples to archive storage.

#### Transferring Frozen Samples to Archive Storage

- ▶ Prepare an insulated pan or container with a one inch (2.5 cm) layer of pulverized or pellet dry ice.
- ▶ Remove the CoolCell container from the freezer, and gently remove the lid using a gentle twisting and rocking motion.
- ▶ Immediately invert the CoolCell container 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 container on a flat surface or on the palm of your hand.

#### Special Notes:

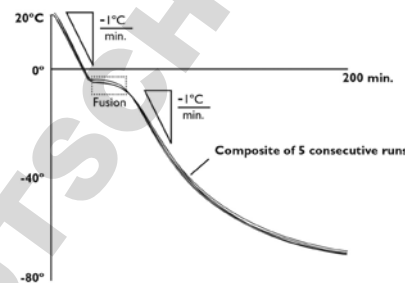
- ▶ Always use dry ice to transfer cryogenic vials containing cells to permanent storage to avoid temperature rise and cell damage. Cryogenic vial contents can rise from -80°C to over -50°C in less than 1 minute if exposed to room temperature air.
- ▶ It is strongly recommended that all frozen cell cultures be checked for viability before the stock culture is terminated.

### Recycling the Corning® CoolCell® Container to Room Temperature

The CoolCell container is ready to freeze again as soon as the foam body and the Core (black ring) are at room temperature. To rapidly recycle the CoolCell container to room temperature, remove the center solid Core ring. The CoolCell body and lid will return to room temperature in 10 to 15 minutes. Check that all chambers are dry. Dry the Core ring before re-inserting into the central cavity.

#### About the CoolCell Freezer Container

The CoolCell container, in combination with a -80°C freezer or dry ice locker, will provide the freezing rate of -1°C per minute that is ideal for cryopreservation of most cultured cell lines. The CoolCell container 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 freezing container). As a result, freezing profiles are extremely consistent from one run to the next. Also, because of this low thermal mass, the CoolCell container 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 container will rapidly return to room temperature for another freezing cycle (see recycle instructions).



#### Corning CoolCell Freezing Performance

The CoolCell container will freeze 12 tubes, each containing 1 mL of cell suspension, at -1°C per minute when placed in a -75°C to -80°C environment (mechanical freezer or dry ice locker). The five consecutive freezing profile curves were performed with 12 sample loads each.

#### Troubleshooting

Problem	Solution
Vials do not freely fit in the chambers.	The CoolCell container is designed to fit standard screw top 1 mL and 2 mL cryogenic vials up to 13 mm in diameter and up to 55 mm in height. Check that the flag style labels, if used, will not bind and hinder insertion or removal.
Vials are stuck in the CoolCell container after freezing.	It is likely moisture was in the vial chambers or on the sample vial prior to freezing. Remove the Core (black ring) and tap the CoolCell container to dislodge vials.
The lid does not fully seat.	Ensure that the sample tubes are fully seated in the chamber. The maximum height of the tube is 55 mm.

#### Care and Cleaning

The CoolCell container is constructed of closed-cell, cross-linked polyethylene foam and a solid thermo-conductive core. The CoolCell container is compatible with prolonged ultra-low or cryogenic temperature exposure. The foam may be cleaned with water and mild soap. Rinse and dry thoroughly. The CoolCell container is resistant to alcohols and 10% bleach solutions. Do not autoclave. Maximum temperature exposure is 60°C. Avoid prolonged exposure to ultraviolet light sources.

**Warranty/Disclaimer:** Unless otherwise specified, all products are for research use only. Not intended for use in diagnostic or therapeutic procedures. Corning Life Sciences makes no claims regarding the performance of these products for clinical or diagnostic applications.

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