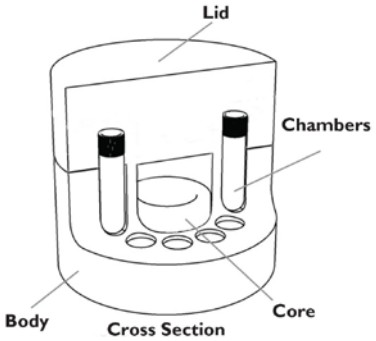
CORNING

Corning® CoolCell® LX Freezing Container

Instructions for Use

Quick Start



- The 12 chambers and cryogenic vials should be dry to avoid the tubes sticking upon freezing.
- Make sure the Core (black ring) is at room temperature and is 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 vials containing 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 LX container.
- Place the CoolCell LX container upright into a -80˚C freezer or dry ice locker. Ensure there is at least one inch of free space clearance around the CoolCell LX 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 LX container from the freezer and gently remove the lid using a gentle twisting and rocking motion.
- Vial tops will be exposed once the lid is removed, and the vials should be quickly extracted and placed onto the dry ice.

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 CoolCell LX Container to Room Temperature

The CoolCell LX container is ready to freeze again as soon as the foam body and Core (black ring) are at room temperature. To rapidly recycle the CoolCell LX container to room temperature, remove the center solid Core ring. The CoolCell LX 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 chamber.

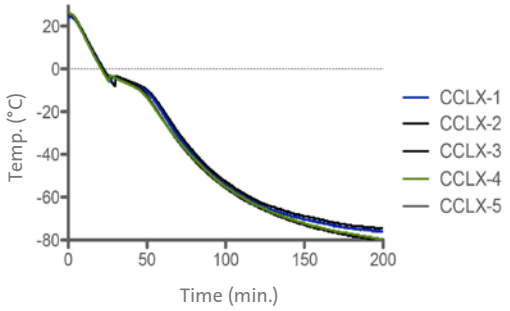
About CoolCell LX

The CoolCell LX 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 LX container 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 Corning® CoolCell® LX 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 LX container will rapidly return to room temperature for another freezing cycle (see recycle instructions).

Corning CoolCell LX Freezing Performance

A temperature probe was placed into a 2.0 mL cryogenic vial containing 1.0 mL of cryopreservative and the tube was inserted into a CoolCell LX container sitting at room temperature. The CoolCell LX container was then placed directly into a -80˚C freezer and the temperature rate and profile were observed over a 3-hour period. This experiment was repeated 5 consecutive times and the temperature profiles were recorded. The Corning CoolCell LX container showed identical cooling profiles and phase transition over five consecutive freeze cycles.



Troubleshooting

Problem	Solution
Vials do not freely fit in the chambers.	The CoolCell LX container is designed to fit standard screw-top 1.0 mL and 2.0 mL cryogenic vials up to 13 mm in diameter and up to 55 mm in height. Check that flag style labels, if used, will not bind and hinder insertion or removal.
Vials are stuck in the CoolCell 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 LX container to dislodge the vials.
The lid does not fully seat.	Ensure that sample tubes are fully seated in the chamber. The maximum height of the tube is 55 mm.

Ordering Information

Cat. No.	Description
432001	Corning CoolCell LX freezing container, purple
432002	Corning CoolCell LX freezing container, green
432003	Corning CoolCell LX freezing container, orange
432004	Corning CoolCell LX freezing container, pink
432138	Corning CoolCell LX freezing containers, 4 colors (purple, green, orange, pink)

Care and Cleaning

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

For additional product or technical information, visit **www.corning.com/lifesciences** or call 800.492.1110. Outside the United States, call +1.978.442.2200 or contact your local Corning sales office.

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