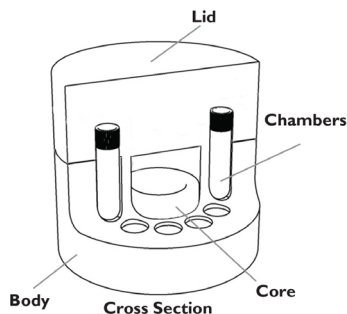


Corning® CoolCell® LX Freezing Container

Instructions for Use

Quick Start

- The 12 chambers and cryogenic vials 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 1.0 mL of cell suspension in each well. Each well should contain a filled vial. If freezing batch is fewer than 12 vials, fill each empty well with a Corning CoolCell® Filler Vial (2 mL vial, part number 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, 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 CoolCell LX container.
- Place CoolCell LX container upright into a -80°C freezer or dry ice locker. Ensure that there is at least one inch of free space clearance around CoolCell LX container.
- Freeze for minimum four hours before transferring samples to archive storage.

Transferring frozen samples to archive storage

- Prepare an insulated pan or container with a one inch (2.5cm) layer of pulverized or pellet dry ice
- Remove CoolCell® LX container from the freezer and gently remove the lid using a gentle twisting and rocking motion.
- Vial tops will be exposed once lid is removed and 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 one 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.

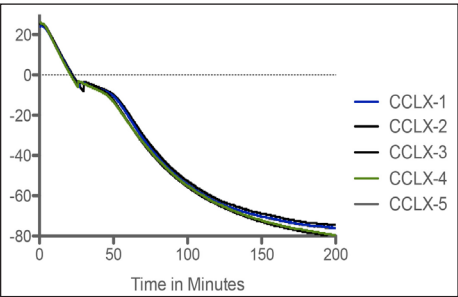
Recycling CoolCell® LX container to room temperature

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 CoolCell LX container to room temperature, remove the center solid core ring. 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, 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 CoolCell LX container will rapidly return to room temperature for another freezing cycle (see fast recycle instructions above).



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. 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 temperature profiles were recorded.

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

Ordering Information

Item No.	Description
432001	CoolCell® LX, purple
432002	CoolCell LX, green
432003	CoolCell LX, orange
432004	CoolCell LX, pink

Care and Cleaning

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