



StrataCooler Cryo Preservation Module

Instruction Manual

Catalog #400005

Revision A

Research Use Only. Not for Use in Diagnostic Procedures.

IN# 70081-00



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StrataCooler Cryo Preservation Module

SPECIFICATIONS

Preservation module	Catalog #	Specifications		
		Capacity	Dimensions	Weight
StrataCooler Cryo preservation module	400005	32 standard cryovials	12 cm W × 21 cm D × 8 cm H	1 kg

APPLICATION

Most cell lines of higher eukaryotes can be preserved indefinitely by storage at -185°C in liquid nitrogen. This temperature ensures that the survival rate of the cells will not significantly change over years of cryopreservation.¹ Cells are prepared for freezing by suspension in special, tissue culture freeze media. These freeze media have a high protein content provided by fetal calf serum (FCS) and dimethylsulfoxide (DMSO) to prevent water crystal formation.

Prior to permanent storage in liquid nitrogen, the temperature of the cells must be lowered to approximately -80°C . The proportion of cells that survive this process is determined by the freezing method used. Most cell types show $>50\%$ survival when cooling rates are kept at $0.2\text{--}1^{\circ}\text{C}/\text{minute}$. The StrataCooler Cryo preservation module has been designed to freeze mammalian and insect cells at a controlled rate of $0.4\text{--}0.6^{\circ}\text{C}/\text{minute}$ to achieve an $80\text{--}90\%$ survival rate.

PROTOCOL

Note *Before use, the StrataCooler Cryo preservation module must be cooled to 4°C by overnight refrigeration.*

1. Harvest the cells by spinning in a centrifuge. Resuspend the cells in ice-cold freeze medium (see *Medium*). Transfer the cell suspension to labeled cryovials.

Note *Most cell lines freeze well at 10⁶ cells/ml. Freeze in 1-ml aliquots.*

2. Transfer the cryovials to the prechilled (4°C) StrataCooler Cryo preservation module.
3. Place the StrataCooler Cryo preservation module in a –80°C freezer.
4. After overnight incubation at –80°C, transfer the vials to liquid nitrogen for long-term storage.

MEDIUM

Freeze Medium

95% FCS

5% DMSO

Combine, filter sterilize and store at –20°C

REFERENCE

1. Simione, F. P., and Brown, E. M., eds. (1991) "ATCC Preservation Methods," Second Ed. American Type Culture Collection, Rockville, Maryland.

MSDS INFORMATION

Material Safety Data Sheets (MSDSs) are provided online at <http://www.genomics.agilent.com>. MSDS documents are not included with product shipments.