

# Synth-a-Freeze<sup>®</sup>, Cryopreservation Medium

## Description

Synth-a-Freeze<sup>®</sup> Cryopreservation Medium is a defined, ready-to-use, liquid cryopreservation medium that can be used with a broad spectrum of primary cells as well as cell lines and demonstrates improved cell viability and recovery after thawing. Synth-a-Freeze<sup>®</sup> Medium contains 10% dimethylsulfoxide (DMSO) and is formulated without antibiotics, antimycotics, hormones, growth factors, serum, or protein and buffered with HEPES and sodium bicarbonate. Synth-a-Freeze<sup>®</sup> Medium is intended for freezing and storing a variety of mammalian cell types including human keratinocytes, embryonic stem cells, neural stem cells, and mesenchymal stem cells. It should not be used for melanocytes.

Product	Catalog No.	Amount	Storage	Shelf Life*
Synth-a-Freeze <sup>®</sup> , Cryopreservation Medium	A12542-01	50 mL	-20°C to -5°C; Protect from light	18 months

\* Shelf Life duration is determined from Date of Manufacture.

## Product Use

For Research or Further Manufacturing Use. Not for use in diagnostic procedures.

## Important Information

- Synth-a-Freeze<sup>®</sup> is not recommended for cryopreservation of human epidermal melanocytes.
- Synth-a-Freeze<sup>®</sup> can be used with any standard freezing protocol.
- Synth-a-Freeze<sup>®</sup> performs comparable to our standard, serum-containing cryopreservation medium for cryopreserving a variety of cell types including human Keratinocytes, Embryonic Stem Cells, Neural Stem Cells, and Mesenchymal Stem Cells.
- Synth-a-Freeze<sup>®</sup> Medium is stable for up to 6 months post-thaw at 2°C to 8°C, and should be equilibrated to 4°C prior to use.

## Safety Information

**WARNING!** Contains Dimethyl Sulfoxide (DMSO), components of the product may be absorbed into the body through the skin. Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

## Use

### Cryopreserve Cells

For optimum results, cells should be in mid-log phase of growth. Similar protocols may be substituted.

1. Thaw Synth-a-Freeze<sup>®</sup> Cryopreservation Medium in a 37°C water bath or overnight at 4°C, mix well and equilibrate to 4°C.  
**Note:** If thawed in a water bath, do not exceed 37°C or leave the product at 37°C for an extended period of time.
2. Determine the desired viable cell density and calculate the required volume of Synth-a-Freeze<sup>®</sup> Medium to give a final cell density of >0.5–3 × 10<sup>6</sup> cells/mL.
3. For adherent cells, gently detach cells from the substrate on which they are growing. Resuspend in complete medium required for that cell type to neutralize the effects of any proteases used.
4. Centrifuge at 100–200 × g for 5–10 minutes.  
**Note:** Centrifugation speed and duration may vary depending on cell type. Aseptically decant supernatant without disturbing the cell pellet.
5. Resuspend the cell pellet in the predetermined volume of (4°C) chilled Synth-a-Freeze<sup>®</sup> for the recommended viable cell density for each specific cell type.
6. Dispense aliquots of cell suspension (mix frequently to maintain a homogeneous cell suspension) into cryogenic storage vials according to the manufacturer's specifications (i.e., 1.5 mL in a 2.0-mL cryovial).
7. Achieve cryopreservation in either an automated or manually controlled rate freezing apparatus following standard procedures (approximately 1°C decrease per minute).
8. Transfer frozen cells to liquid nitrogen (Vapor phase); storage at -200°C to -125°C is recommended.

## Related Products

Product	Catalog No.
Human Epidermal Keratinocytes, neonatal (HEK <sub>n</sub> )	C-001-5C
Human Epidermal Keratinocytes, adult (HEK <sub>a</sub> )	C-005-5C
Defined Keratinocyte-SFM (1X), Liquid	10744
Medium 154	M-154-500
EpiLife® Defined Growth Supplement (EDGS)	S-012-5
Supplement S7	S-017-5
Coating Matrix Kit	R-011-K
Trypan Blue Stain	15250
Countess® Automated Cell Counter	C10227

## Explanation of Symbols and Warnings

The symbols present on the product label are explained below:

Temperature Limitation	Manufacturer	Batch code	Use By:	Catalog number
Caution, consult accompanying documents	Consult instructions for use	Protect from light	Sterilized using aseptic processing techniques	

## Limited Use Label License: Internal Research and Bioproduction Use

The purchase of this product conveys to the purchaser the limited, non-transferable right to use the purchased amount of the product (a) to perform internal research for the sole benefit of the purchaser; and (b) to culture cells for the purpose of producing a product wherein the product will be used for any or all of the following: (i) internal research use by the purchaser; (ii) resale for internal research use by third parties; (iii) performance of research conducted by the purchaser on a fee for service or contract basis for or on behalf of third parties; (iv) resale for use as a human therapeutic agent or diagnostics product or component by third parties; (v) performance of manufacturing services conducted by the purchaser on a fee for service or contract basis for or on behalf of third parties.

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## Limited Product Warranty

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For additional technical information such as Safety Data Sheets (SDS), Certificates of Analysis, visit [www.lifetechnologies.com/support](http://www.lifetechnologies.com/support)  
For further assistance, email [techsupport@lifetech.com](mailto:techsupport@lifetech.com)

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