

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT: Cell thawing solution

Product category	Packaging Specification	Reference (Product code)
ThawBest	100mL bottle	142
ThawBest	500mL bottle	143

Date Prepared: 09/01/2026

Version: 1.0

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

- **Product Name:** Cell thawing solution
- **Manufacturer/Supplier:** VNUHCM-US Stem Cell Institute
- **Address:** B2-3 Building, University of Science, quarter 6, Linh Xuan Ward, Ho Chi Minh City
- **Emergency Phone:** (+84) 28 3636 1206
- **Intended Use:** Sterile laboratory solution for washing and resuspending cells after thawing, aiding in the removal of cryoprotectants and providing a stable environment for the cells.

SECTION 2: HAZARDS IDENTIFICATION

- **Classification:** Sterile product, contains proteins and amino acids.
- **Primary Hazard Warnings:**
 - **Exposure to the solution:** May cause mild irritation to eyes and skin.
 - **After use:** If the solution has come into contact with human cells or biological samples, it must be treated as potentially infectious material.
 - **Bottle/Vial Breakage:** May cause injury from glass/sharps.
- **GHS Warning Symbol:** Use the "**Warning**" symbol (exclamation mark) for irritation.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- **Primary Ingredients:**
 - **Human Serum Albumin (HSA):** 5% (w/v)
 - **Amino Acid Mixture:** Glutamine, Arginine, and other essential amino acids.
 - **Other Components:** Inorganic salts (NaCl, KCl), Buffer (e.g., HEPES), Sterile distilled water.
- **Function:** Provides proteins and nutrients to support cells during post-thaw washing, stabilizing the cell membrane.

SECTION 4: FIRST AID MEASURES

- **Inhalation:** Not applicable. Avoid inhaling aerosol if splashed.
- **Skin Contact:** Rinse immediately with plenty of water and soap. If irritation persists, seek medical attention.
- **Eye Contact:** Rinse eyes immediately under gently flowing water or with an eyewash solution for at least 15 minutes. Seek medical attention if necessary.
- **Ingestion:** Rinse mouth, drink plenty of water. Do not induce vomiting. Consult a doctor if a large amount is swallowed.
- **General Note:** For exposure to used solution containing biological samples, follow biological exposure control procedures.

SECTION 5: FIRE-FIGHTING MEASURES

- **Suitable Extinguishing Media:** Fire extinguishers (powder, CO₂, foam). Water can be used to cool containers.
- **Special Hazards:** May produce toxic gases upon combustion (carbon monoxide, nitrogen oxides).
- **Protective Equipment for Firefighters:** Use SCBA and flame-retardant protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Personal Precautions:** Wear full PPE: gloves, safety goggles, lab coat.
- **Environmental Precautions:** Contain the spilled liquid.
- **Clean-up Methods:**
 1. Absorb with inert material (absorbent paper, sand).
 2. Collect into appropriate waste container (biohazard if used).
 3. Disinfect the area with a suitable disinfectant.
 4. Wipe clean.
- **Note:** Handle broken glass as sharp waste.

SECTION 7: HANDLING AND STORAGE

- **Handling:** Use aseptic technique. Avoid contamination.
- **Storage:**
 - 12 months at -20°C to below 0°C (from manufacturing date).
 - 2 months at 0°C to 8 °C (from manufacturing date)
 - Avoid direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- **Engineering Controls:** Handle in a biological safety cabinet if there is a risk of biological exposure.
- **Personal Protective Equipment (PPE):**
 - **Eyes/Face:** Safety goggles or face shield.
 - **Skin/Hands:** Powder-free nitrile/latex gloves, laboratory coat.

- **Respiratory:** N95 mask when working with large volumes or in poorly ventilated areas.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **Physical State:** Liquid solution.
- **Color:** Clear, pale yellow.
- **Odor:** Odorless or slight characteristic odor.
- **pH:** 6.5 – 7.5.
- **Endotoxin (EU/mL):** ≤ 1.0
- **Mycoplasma:** Negative
- **Sterility:** Negative
- **Specific Gravity:** ~ 1.0 -- 1.05 g/mL.
- **Solubility:** Completely soluble in water.

SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under recommended storage conditions.
- **Conditions to Avoid:** High temperature, direct sunlight.
- **Incompatible Materials:** Strong oxidizing agents.
- **Hazardous Decomposition Products:** Toxic gases may be produced upon combustion.

SECTION 11: TOXICOLOGICAL INFORMATION

- **General Information:** Low toxicity. Primary risk is mild irritation.
- **Acute Toxicity:**
 - **Oral:** May cause gastrointestinal irritation.
 - **Dermal/Ocular:** Mild irritation.
- **Irritation/Sensitization:** May cause mild irritation.

SECTION 12: ECOLOGICAL INFORMATION

- **Ecotoxicity:** Low toxicity to aquatic organisms.
- **Mobility:** Will not migrate into the environment if handled properly.
- **Biodegradability:** Organic components are biodegradable.

SECTION 13: DISPOSAL CONSIDERATIONS

- **Waste Disposal Method:** Comply with local medical waste regulations.
 - **Unused solution:** Dispose of as regular industrial waste if uncontaminated.
 - **Used solution (containing biological samples):** Treat as **infectious waste** (yellow bag/container).
 - **Sharps:** Place in designated sharps container.

SECTION 14: TRANSPORT INFORMATION

- **Transport Code (UN/ID):** Not classified as dangerous goods when unused.
- **Proper Shipping Name:** Cell culture medium solution.

- **Special Precautions:** Keep products frozen during transport. Avoid shock.

SECTION 15: REGULATORY INFORMATION

- **Health and Safety Regulations:** Comply with laboratory safety and biological sample handling regulations.
- **Environmental Regulations:** Comply with medical waste collection and disposal regulations.

SECTION 16: OTHER INFORMATION

- **References:** Thawbest User Guide and Post-Thaw Cell Washing Protocol.
- **Revision Date:** 09/01/2026 (First version).
- **Disclaimer:** The information in this document is based on current scientific knowledge. The user must independently evaluate and is responsible for compliance with applicable regulations and safe practices under specific conditions.