MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT: Cell cryopreservation solution

Product category	Packaging Specification	Reference (Product code)
MSCCryosave OTS® TH	100mL bottle	183
MSCCryosave OTS® TH	500mL bottle	111

Date Prepared: 08/01/2026
Version: 1.0

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

- **Product Name:** Cell cryopreservation 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:** A solution for cell preservation during freezing, free of DMSO. Trehalose acts as a cryoprotectant, stabilizing cell membranes under freezing conditions, suitable for the culture and preservation of sensitive cells.

SECTION 2: HAZARDS IDENTIFICATION

- **Classification:** Sterile product, containing proteins, amino acids, and sugar.
- **Primary Hazard Warnings:**
  - **Skin/Eye Contact:** May cause mild irritation.
  - **Ingestion:** May cause gastrointestinal irritation.
  - **Biological Hazard:** Does not contain pathogens, but careful handling is required if product becomes biologically contaminated during use.
- **GHS Hazard Pictogram(s):** Consider using the "Warning" (exclamation mark) symbol for skin/eye irritation.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- **Main Ingredients:**
  - Human Serum Albumin (HSA)
  - Trehalose
  - Amino Acid Mixture
  - Stabilizers and Biological Buffers
  - Sterile Distilled Water
- **Concentration:** According to the manufacturer's proprietary formula. Trehalose is typically at a concentration of 1-5% (w/v).

SECTION 4: FIRST AID MEASURES

- **Inhalation:** Move to fresh air. If respiratory symptoms occur, seek medical attention.
- **Skin Contact:** Wash immediately with plenty of water and soap.
- **Eye Contact:** Rinse cautiously with water under low pressure for at least 15 minutes, holding eyelids open. Seek medical attention if irritation persists.
- **Ingestion:** Rinse mouth, drink plenty of water. Do NOT induce vomiting. Consult a physician if necessary.

SECTION 5: FIRE-FIGHTING MEASURES

- **Suitable Extinguishing Media:** Powder, CO2, or foam fire extinguishers.
- **Specific Hazards:** Non-flammable, non-explosive. May produce toxic fumes (CO, NOx) upon combustion.
- **Protective Equipment for Firefighters:** Use Self-Contained Breathing Apparatus (SCBA) and flame-retardant protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Personal Precautions:** Wear PPE: gloves, safety goggles, lab coat.
- **Clean-up Methods:**
    1. Absorb spill with appropriate absorbent material.
    2. Collect into a biohazard waste bag.
    3. Clean area with a disinfectant solution.
    4. Wash hands thoroughly after handling.

SECTION 7: HANDLING AND STORAGE

- **Handling:** Use aseptic technique. Avoid microbial contamination.
- **Storage:**
    - Store and transport at **2 – 25°C**.
    - Store at **2 – 8°C** for at least 12 hours before use.
    - Do not freeze.
    - Protect from direct light.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- **Engineering Controls:** Work in a biological safety cabinet if there is a risk of biological contamination.
- **Personal Protective Equipment (PPE):** Gloves, safety goggles, laboratory coat.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Liquid solution, may be slightly viscous due to Trehalose content.
- **Color:** Clear, yellow.
- **Odor:** Odorless or slight characteristic odor.
- **pH:** 6.5 – 7.4.

- **Endotoxin (EU/mL)**: ≤ 0.25
- **Mycoplasma:** Negative
- **Sterility:** Negative
- **Specific Gravity:** ~1.05 - 1.10 g/mL (may be higher depending on Trehalose concentration).
- **Solubility:** Completely soluble in water.

SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under recommended storage conditions. Trehalose helps stabilize proteins and cells.
- **Conditions to Avoid:** High temperature, strong light.
- **Incompatible Materials:** Strong oxidizing agents.

SECTION 11: TOXICOLOGICAL INFORMATION

- **Acute Toxicity:** Low toxicity. Trehalose is a natural sugar with high biosafety.
- **Irritation/Sensitization:** May cause mild skin/eye irritation in sensitive individuals.

SECTION 12: ECOLOGICAL INFORMATION

- **Ecotoxicity:** Low. Trehalose and other components are biodegradable.
- **Environmental Handling:** Dispose of in accordance with medical/biohazard waste regulations.

SECTION 13: DISPOSAL CONSIDERATIONS

- **Waste Disposal:** Dispose of used or contaminated product as medical/biohazard waste. Unused product may be disposed of as general industrial waste.

SECTION 14: TRANSPORT INFORMATION

- **Transport:** Not classified as dangerous goods. Store at 2-8°C during transport if possible.
- **Packaging:** Sterile, sturdy bottles/vials.

SECTION 15: REGULATORY INFORMATION

- **Compliance:** Complies with biosafety and medical waste handling regulations.

SECTION 16: OTHER INFORMATION

- **References:** Based on manufacturer's guidelines and industry standards.
- **Revision Date:** 08/01/2026 (Initial Version)
- **Disclaimer:** Information provided is for reference only. Users are responsible for adhering to current safety regulations and best practices.