

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT: Mesenchymal stem cell culture medium

Product category	Packaging Specification	Reference (Product code)
MSCCult I	500mL bottle	108
MSCCult I Primary	100mL bottle	110
Bioreactor MSCCULT II	500 mL bottle	134
Bioreactor MSCCult I	500 mL bottle	246
MSCCult II Primary	100mL bottle	295
MSCCult II	500mL bottle	296
MSCCult II Primary	500 mL bottle	330

Date Prepared: 08/01/2026

Version: 1.0

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

- **Product Name:** Mesenchymal stem cell culture medium
- **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:** Liquid nutrient medium for the culture, maintenance, and expansion of mesenchymal stem cells under laboratory conditions.

SECTION 2: HAZARDS IDENTIFICATION

- **Classification:** Sterile product, containing organic and inorganic components.
- **Main Hazard Warnings:**
 - May cause mild skin or eye irritation on contact.
 - Not for oral consumption or direct injection into the body.
 - If contaminated with microorganisms during use, may become a source of biological infection.
- **GHS Warning Symbol:** "Warning" symbol (exclamation mark) for skin/eye irritation.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- **Formulation:** Sterile liquid solution.
- **Main Components:**
 - Amino acids (e.g., L-glutamine)
 - Vitamins (e.g., Vitamin B12, Ascorbic acid)
 - Electrolytes (e.g., NaCl, KCl, NaHCO₃)
 - Growth factors (e.g., FGF, EGF)
 - pH Stabilizers (e.g., HEPES)
 - Antibiotics (if present, e.g., Penicillin-Streptomycin)
- **Additives:** May contain phenol red as a pH indicator.

SECTION 4: FIRST-AID MEASURES

- **Inhalation:** Move to fresh air. If breathing difficulties occur, seek medical attention.
- **Skin Contact:** Wash immediately with plenty of water and soap. Remove contaminated clothing.
- **Eye Contact:** Rinse eyes immediately under gently flowing water for at least 15 minutes. Hold eyelids open and rotate eyeballs. Seek medical attention if irritation persists.
- **Ingestion:** Rinse mouth immediately with clean water. Drink plenty of water. Do not induce vomiting. Consult a physician if necessary.
- **General Note:** Keep the product out of reach of children and pets.

SECTION 5: FIRE-FIGHTING MEASURES

- **Suitable Extinguishing Media:** Use CO₂ extinguishers, dry chemical powder, or foam.
- **Specific Hazards:** Decomposition during fire may produce toxic fumes (e.g., CO, NO_x, organic smoke).
- **Protective Equipment for Firefighters:** Use self-contained breathing apparatus (SCBA) and flame-retardant protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Personal Precautions:** Wear nitrile gloves, safety goggles, and a lab coat.
- **Clean-up Procedure:**
 1. Absorb the spill with paper towels or inert absorbent material.
 2. Collect into a medical waste bag or chemical waste container.
 3. Wipe the area clean with a suitable disinfectant (e.g., 70% ethanol).
- **Note:** Do not pour directly into drains.

SECTION 7: HANDLING AND STORAGE

- **Handling:** Use aseptic technique in a biological safety cabinet. Avoid direct contact with skin and eyes.
- **Storage:**
 - 12 months at -20°C to below 0°C (from manufacturing date).
 - 2 months at 0°C to 8 °C (from manufacturing date)
 - After opening, use immediately or store at 2°C - 8°C and use within 1-2 weeks.
 - Protect from direct sunlight and high temperatures.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- **Engineering Controls:** Work in a biological safety cabinet when risk of microbial contamination exists.
- **Personal Protective Equipment (PPE):**
 - Powder-free nitrile or latex gloves.
 - Safety goggles or face shield.
 - Laboratory coat.
 - Medical mask or N95 respirator when handling large volumes.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **Physical State:** Liquid solution
- **Color:** Red pink.
- **Odor:** Odorless or slight characteristic odor
- **pH:** 7.2 – 8.2
- **Osmolality (mOsm/kg):** 286 – 356
- **Endotoxin (EU/mL):** ≤ 1.0
- **Mycoplasma:** Negative
- **Sterility:** Negative
- **Specific Gravity:** ~1.0 g/mL
- **Solubility:** Completely soluble in water

SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under recommended storage conditions.
- **Conditions to Avoid:** High temperature, strong light, microbial contamination.
- **Incompatible Materials:** Strong oxidizing agents, concentrated acids, strong bases.

SECTION 11: TOXICOLOGICAL INFORMATION

- **Acute Toxicity:** May cause mild irritation to skin and eyes.
- **Irritation/Sensitization:** May cause mild irritation. No reported sensitization potential.

SECTION 12: ECOLOGICAL INFORMATION

- **Ecotoxicity:** Low toxicity to aquatic organisms.
- **Biodegradability:** Organic components are biodegradable.

SECTION 13: DISPOSAL CONSIDERATIONS

- **Waste Disposal Method:**
 - Dispose of used containers into chemical or biological waste containers.
 - Comply with local regulations for laboratory waste disposal.

SECTION 14: TRANSPORT INFORMATION

- **UN/ID Number:** Not classified as dangerous goods.
- **Proper Shipping Name:** Cell culture medium.
- **Special Precautions:** Keep products frozen during transport.

SECTION 15: REGULATORY INFORMATION

- **Safety and Health Regulations:** Complies with chemical safety and biosafety regulations.
- **Environmental Regulations:** Complies with chemical and biological waste disposal regulations.

SECTION 16: OTHER INFORMATION

- **References:** Based on manufacturer's guidelines and standard cell culture protocols.
- **Revision Date:** 08/01/2026 (First version).
- **Disclaimer:** The information contained herein is for reference purposes only. The user is responsible for complying with all applicable safety regulations.