



## **SPERM CRYO SYSTEM, 0.25 ml, Transparent, For Sperm Cryopreservation**

### **A. USAGE:**

- SPERM CRYO SYSTEM are specialized tool used for sperm cryopreservation in Assisted Reproductive Technologies (ART).

### **B. STORAGE:**

- Store in a clean, dry environment, away from light and heat sources.

### **C. STERILITY:**

- Sterile A

### **D. DESCRIPTION:**

- Straw length 133 mm, flexible, transparent, made of high-quality materials.
- This straw is composed of two distinct sections separated by a white safety plug.

### **E. PRECAUTIONS:**

#### **1. Handling and storage:**

- This product is for laboratory use only and should be handled by trained professionals.
- Always handle straws with cryo-safe gloves to avoid thermal injury.
- Store straws in labeled canisters within the liquid nitrogen tank to prevent misidentification.

#### **2. Avoid overfilling:**

- Overfilling straws can lead to cracking or rupture because the sample volume increase during freezing process that make excessive pressure.
- To prevent these issues, always leave a small air gap inside the straw to accommodate expansion, and begin freezing in nitrogen vapor (-80 °C to -120 °C) for gradual cooling before immersing in liquid nitrogen (-196 °C).

#### **3. Sterility:**

- Single use only.
- Avoid touching the open ends of the straw to avoid contamination.

#### **4. Freezing process:**

- Always use a gradual cooling process to prevent thermal shock and ensure sample viability.

#### **5. Labeling:**

- Use permanent, freezing resistant labels to prevent sample data under freezing conditions.

#### **6. Equipment safety:**

- Use appropriate safety equipment when working with liquid nitrogen to avoid burns.

## **F. PROCEDURES:**

### **1. Preparation:**

- Collect and evaluate the sample for quality, adjusting it with a cryoprotective freezing medium to protect sperm cells during freezing.
- Verify that the straws are sterile and the package is intact before use.
- Ensure all tools and cryoprotective agents are pre-prepared and at the required temperatures.
- Maintain an aseptic environment to avoid contamination.

### **2. Filling & Sealing:**

- Fill straws with sample and seal them, ensuring proper labeling with details and freezing date.
- Load the sample (e.g., semen sample) using a filling nozzle and a micro-aspirator or a syringe with a specific fitting.
- Do not fill the straw completely, leave a small air gap inside the straw (about 10 % of the volume) to accommodate expansion during freezing.
- The sample should rise through the white safety plug up to half of the powder.
- Seal both ends of the straw securely using a heat sealer.
- Label each straw clearly with sample ID, date, and any other necessary information.

### **3. Freezing:**

- Place straws horizontally in a controlled freezing device or in nitrogen vapor (-80 °C to -120 °C) for 15 – 30 minutes.
- Transfer the straws into liquid nitrogen tank (-196 °C) for long term storage.

### **4. Thawing:**

- Retrieve the straw carefully from the liquid nitrogen using cryo-safe gloves and tools.
- Place the straw in a water bath at the appropriate thawing temperature (e.g., 37 °C) for a few seconds.

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