



**SAR HEALTHLINE (P) LTD**

## **Quinn's Advantage™ Embryo Freeze kit**

**For laboratory procedures only; other uses must be qualified by the end user.**

<b>Product Description</b>	<b>Catalogue Code</b>	<b>Unit Size</b>
Quinn's Advantage™ Embryo Freeze kit	ART-8014	4x 12mL

### **INTENDED USE**

Quinn's Advantage™ Embryo Freeze Kit was developed for use in freezing pronuclear and cleavage-stage embryos.

### **DESCRIPTION**

The components of this kit will allow for the efficient freezing of pronuclear and cleavage stage embryos. The components and recommended procedures are the preferred method for improved embryo survivability.

### **MATERIALS PROVIDED IN THE EMBRYO FREEZE KIT**

- 1 12mL vial of 1.5M Propanediol, 0.1M Sucrose Freezing Medium with 12mg/mL Human Serum Albumin.
- 2 12mL vials of 1.5M Propanediol Freezing Medium with 12mg/mL Human Serum Albumin.
- 3 1 12mL vial of Freeze/Thaw Diluent Solution with 12mg/mL Human Serum Albumin.

### **RECOMMENDED PROCEDURES FOR CRYOPRESERVATION OF EMBRYOS**

Controlled hyperstimulation of women undergoing IVF or GIFT produces, on average, 10 to 12 mature oocytes for insemination. It is prudent to replace only a limited number of the resulting embryos, as multiple pregnancies can arise if too many embryos are replaced. Therefore, the majority of patients will have supernumerary embryos.

These embryos can be cryopreserved and stored for later use, thus avoiding the necessity of the couple to undertake another stimulated cycle to recover more oocytes for IVF.

The major cause of cell damage during cryopreservation is the formation of intracellular ice during freezing and thawing. By using cryopreservatives, controlling the rate of freezing and thawing, and carefully diluting the cryopreservative from the embryo after thawing, methods have been developed that allow 80% or more of frozenthawed embryos to survive and be replaced into the reproductive tract of the woman who produced the oocytes or a genetically non-related recipient.

1. Prepare solutions containing 0.5M and 1.0M propanediol (PPD) by diluting the stock solution of 1.5M PPD with the Freeze/Thaw Diluent Solution:
  - a. To prepare the 0.5M PPD solution, add 0.3mL of 1.5M PPD to 0.6mL of Diluent.
  - b. To prepare the 1.0M PPD solution, add 0.6mL of 1.5M PPD to 0.3mL of Diluent.
2. Embryos are pipetted at 37°C into the 0.5M PPD solution for 5 minutes, then the 1.0M PPD solution for 5 minutes, and finally into 1mL of the 1.5M PPD solution. They are then transferred to 1mL of 1.5M PPD + 0.1M Sucrose Freezing Medium and pipetted into straws\* containing this same solution. They are held at 37°C in the 1.5M PPD + 0.1M Sucrose solution for a total of 5 minutes before cooling is initiated.

**3.** As an alternative, the embryos can be placed directly into the 1.5M PPD solution for 10 minutes before transfer to the 1.5M PPD + 0.1M Sucrose Freezing Medium.

\* Vials, eg 1.2mL plastic cryovials, can also be used and have been found to be preferable by some laboratories.

It is important to make sure that the embryos are well mixed with the cryoprotectant solutions. This can be accomplished by pipetting the embryos up and down in the solution several times after adding them to the cryoprotectant solution. It is also recommended that the media be covered with Sterile Oil for Tissue Culture during use to minimize evaporation of water and a subsequent change in osmolality of the solutions.

### **COOLING PROTOCOL**

Embryos are usually frozen in straws, but 1.2mL vials can be used as an alternative. The embryos are taken from a starting temperature of 37°C to -6°C at 2°C/min. They are then seeded manually and held at -6°C for a total of 10 to 15 minutes before being cooled at about 0.3°C/min to around -35°C. They are then transferred to a storage tank of liquid nitrogen.

**Each laboratory should make its own determination of which medium to use for each particular procedure.**

### **STORAGE INSTRUCTIONS AND STABILITY**

Store unopened containers at 2-8°C. Warm to incubator (37°C) temperature prior to use. Do not freeze or expose to temperatures greater than 39°C. The product is stable until the expiration date shown on the label or within 30 days of the Date of First Use provided that proper aseptic procedures have been observed by the user:

- A. Remove desired volume of product using aseptic procedures.
- B. Once product has been removed from the original container, reseal the container to ensure a tight seal. Write the date the product was first opened on the product label. Do not use product longer than 30 days after opening the container.
- C. Once removed, do not return any volume of product to the original container.
- D. Once the product has been opened, store the sealed container at 2-8°C.
- E. Do not use if the product becomes discolored, cloudy, turbid, or shows any evidence of microbial contamination.