Preparation of EmbryoSlide Culture dishes

The EmbryoSlide® culture dish is specifically designed for the individual culture of up to 12 embryos in the EmbryoScope™ time-lapse incubator. The dish also contains wells designed for rinsing.
The EmbryoSlide culture dishes are designed for easy and stable handling and are made of culture-tested polystyrene. They are delivered in sterile, single pouches.

Vitrolife recommends preparation of EmbryoSlide culture dishes a day before use. Prepare the dishes with cold medium and on a non-heated surface to avoid evaporation. The procedure described below requires less than 1.5 minutes per dish.

General characteristics of the EmbryoSlide culture dish

The embryos are incubated in individual microwells in a small (25 µl) volume of culture medium under a confluent oil cover.

Each well carries a number from 1 to 12 for identification under a stereo microscope. Each well number corresponds to the well identification number in the EmbryoViewer® software.

Two rinsing wells are available at each end of the dish. These special wells can be used during embryo handling (identified as A-D).

There is a slight variation in how much the temperature decreases in the microwells (approx. 0.6°C) and the rinsing wells (approx. 0.7°C). Both measurements have been performed on a 37°C heating plate over a period of two minutes. This represents normal dish handling time.

Each batch of EmbryoSlide+ culture dishes must pass our stringent MEA testing procedure before being released for sale as part of the Vitrolife quality assurance.

Preparation for use on the next day

Prepare the EmbryoSlide culture dishes on the day before use. Prepare one dish at a time to minimise the handling time of each dish.

The EmbryoSlide culture dishes should be prepared with cold medium and oil on a non-heated workbench to avoid evaporation of the medium during preparation.

When they have been prepared, the culture dishes must equilibrate overnight before loading embryos into the microwells.

Use a stereo microscope to control the process.

The recommended procedure for preparing the culture dishes is outlined on the next page.

Step	Action

Remove the culture dish from the pouch.
Prepare the dishes with cold culture medium and oil on a non-heated workbench to avoid evaporation.
Prepare one dish at a time to minimise the handling time of each dish.

Fill all microwells with a small amount of culture medium*
Use a micropipette.
Slightly overfill the microwell to create a convex meniscus.

Immediately fill all needed wells, including the rinsing wells, with 25 µL of culture medium*. Use a standard pipette.

Immediately load 1.4 mL of culture oil* into the reservoir
It is important to apply the oil overlay quickly to avoid evaporation of medium.
Make sure that all wells, including the rinsing wells, are covered with a confluent oil layer to eliminate evaporation of medium. Add an additional 25µL of culture oil per well not filled with medium.

Push up larger bubbles with a micropipette and remove them
Cover with the lid and equilibrate overnight.
Remove any bubbles that may have formed.

Load embryos into the center of microwells. Use a micropipette.

Place the dish in the EmbryoScope incubator.

If you want to change medium during the culture period:
From each culture well remove 20 µl old medium and add 20 µl new warm equlibrated medium.
It is important to remove and add the medium in a constant flow and keep the tip of the pipette away from the embryos.

*Vitrolife recommends using G-TL medium, designed specifically for continuous culture with time-lapse technology and OVOIL Heavy™ 100% paraffin culture oil for complete control of your culture system. Vitrolife products are produced under highly controlled processes.