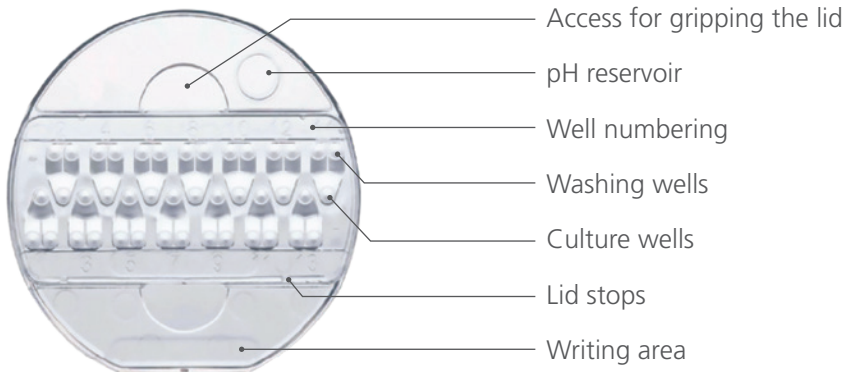# ESCO
MEDICAL

CultureCoin®

CultureCoin®
for MIRI® TL

The Esco Medical CultureCoin® is a sterile, single use, culture vessel specifically developed for use in IVF. The dish holds up to 14 embryos in the centrally placed line of culture wells. The culture well features a 300μm, optically clear area where the embryo is situated and is an area optimized for microscopy. The culture wells are numbered (1-14) for easy location of each well by the user. Each culture well has two washing wells for cell manipulations, washing media or replacement media.
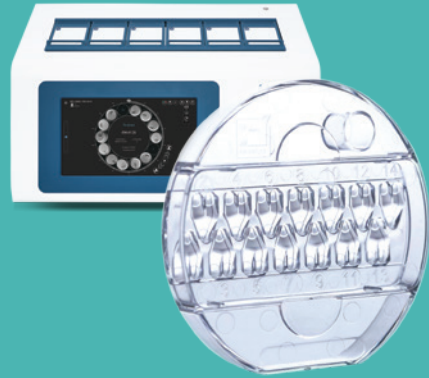
The lid is mounted inside the circumference of the dish covering the culture area completely – the user will only grab the dish during handling and not risk losing the dish by holding on to the lid only – as can be the case on all traditionally designed dishes. A large well is provided outside the culture are for pH measuring without affecting the cultured samples. The dish has a flat bottom so it is ideal for heat transfer from below.

Parts of the CultureCoin®

Access for gripping the lid

pH reservoir

Well numbering

Washing wells

Culture wells

Lid stops

Writing area

Directions for Use

1. Both the lid and the dish should be unpacked in an aseptic environment.

2. Leave the dishes covered in the aseptic environment for 12 hours for off-gassing.

3. Prior to filling with media, warm the dishes on a heated stage or incubator.

4. In the aseptic environment, fill all the wells with app. 25 µl of precultured equilibrated culture media. Filling the washing wells is optional. They may contain app. 23 µl each.

Oil
Media
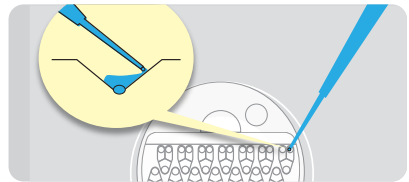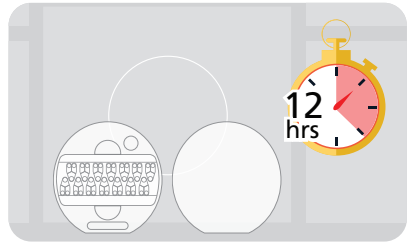
5. Check under a microscope for any visible air bubbles and remove them with a stripper tip.

6. Fill the oil area with a confluent layer of suitable mineral or paraffin oil in a way that it would cover the culture media. Do not overfill.

7. Put the lid on the dish and leave it in the CO_2 incubator for 4 hours to equilibrate.
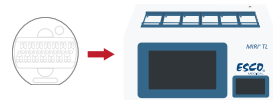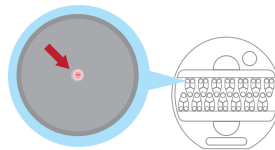
8. After equilibration, check the culture wells for air bubbles. Remove any bubbles with a stripper tip.

9. Load embryos in the wells. Make sure the embryos are located very precisely in the centre of the culturing well and not on the side slope.

10. Optionally fill the pH reservoir and insert the silicone plug.

11. Incubate CultureCoin® in MIRI® TL.

CultureCoin® Placement in the Compartment:

Before starting the time-lapse, it is essential to place the CultureCoin® in the compartment properly. To ensure the correct position of the CultureCoin® (so that the camera can identify all the wells), place the CultureCoin® in its place and secure its position by pushing it downwards and towards you, then to the left edge.

Positioning CultureCoin® in the compartment
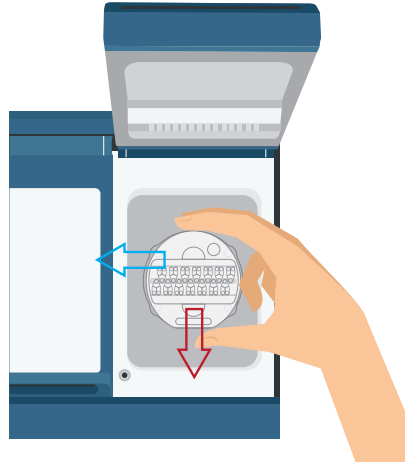
Removing the CultureCoin® Lid:

CultureCoin® lid does not have a lot of free movement on the dish while it is closed, but the lid may move slightly during transportation. The lid can rotate a bit on the CultureCoin® and get stuck on the dish edges. As a result, it may be harder to open it. In such a case, there is a specific technique for the CultureCoin® lid opening. Hold the dish and lift the lid from the cut edge.
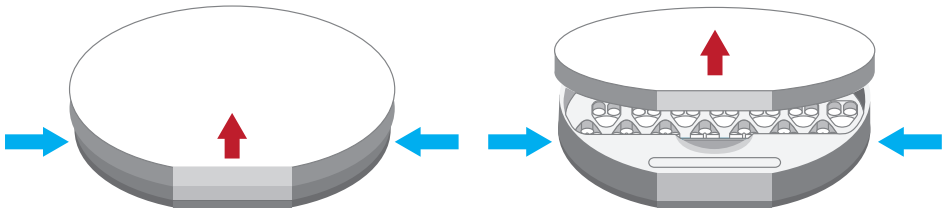
CultureCoin® lid opening. *Do not twist the lid of the CultureCoin®, because it will be locked, and it will be even harder to open it.*

pH measuring

Validating the pH of the culture media should be a standard procedure. The CultureCoin® is equipped with a reservoir that is located outside the culturing area. This makes it possible to safely and conveniently make spot checks on the pH level. A micro probe that can measure in a droplet can also be supplied.

General Specifications

CultureCoin®

Technical specifications	CultureCoin®
Overall dimensions (Diameter x Height)	Ø 71 x 10 mm
Weight empty	0.5 gram
Material	Polystyrene
Temperature range	25 – 40 oC
CO_2 range	1.9 – 10%
O_2 range	4.9 – 20.0%
Sterilization method	Gamma beam
Lifetime	1 year
Toxicity tested	Embryo toxicity tested with thawed 1 cell mouse embryos. Expanded Blastocyst rate after 96 hours > 80 % (n=150)0.6 bar (8.70 PSI)

Ordering Information

ITEM CODE	MODEL CODE	DESCRIPTION
1320088	MRI-CC	CultureCoin® for Time-Lapse of 14 embryos

MIRI® Time-Lapse Incubator

The MIRI® Time-Lapse Incubator is a multiroom incubator with a built-in camera and microscope. Designed and manufactured in EU, the MIRI® Time-Lapse Incubator provides high quality time-lapse images of embryos developing in "real-time" without having to remove the embryos from the safety of the incubation chamber for manual microscopy. Time-lapse embryo monitoring provides detailed morphokinetic data throughout embryo development, which is not available on routine spot microscopic evaluation. This allows all important events to be observed, helping to identify healthy embryos with the highest probability of implantation, with the aim of achieving higher pregnancy rates.

The MIRI® TL makes use of the CultureCoin®, a specifically designed culture dish, that allows each chamber to culture 14 embryos, giving a total capacity of 84 embryos for the TL6 and 168 embryos for the TL12. (then add photo of MIRI TL 6 and 12)

Key Features

Heated Lid
Prevents condensation and enhances temperature regulation/recovery.

Time-Lapse Monitoring
As images are digitally-stored, a video can be generated to enable a more objective and reliable grading of embryos which allows to better predicting embryo development and implantation potential.

Multiroom System
The MIRI® TL6 and TL12 have multiple independent chambers with very stable environments, allowing embryologist to culture embryos from individual patients in individual chambers.

Direct Heat Transfer
Provides superior temperature stability.

Touch Screen Control Panel
Allows easy and intuitive operation of the system.

CultureCoin®

The MIRI® TL makes us of a culture dish, exclusively designed for the MIRI® TL

Advanced CO_2 + O_2 Regulation

The built-in gas mixer and the high-performance CO_2 and O_2 sensors allow accurate control of gas phase composition in the chambers.

High Quality Recirculated Airstream

HEPA-VOC

The MIRI® TL is specially equipped with HEPA/VOC filter to help eliminate harmful VOCs and particulates.

Easy Parameter Validation

The TL range can be connected to a MIRI® GA, a Gas and Temperature Validation unit, for continuous external validation of both gas and temperature.
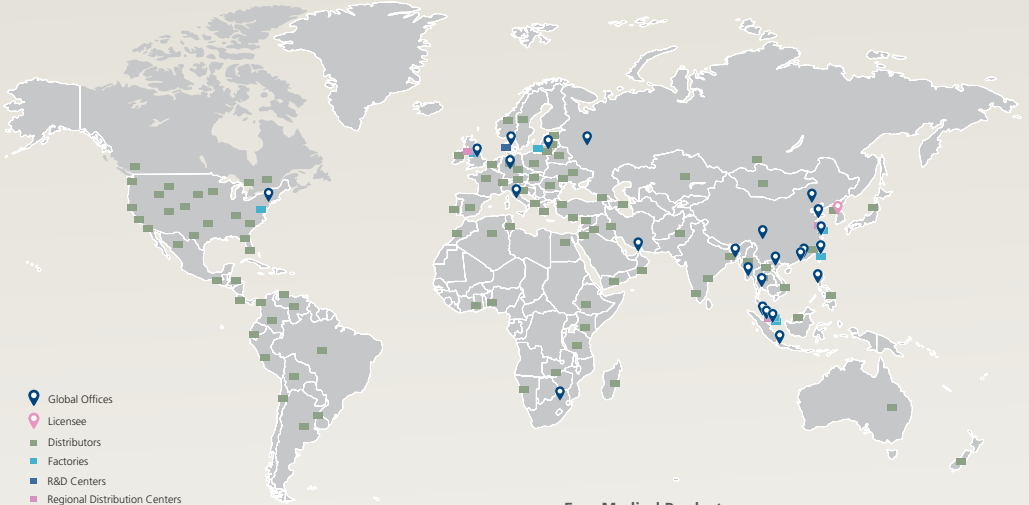
Sophisticated Tools for Annotation

It has sophisticated software that gives the user the ability to customize each event completely.

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Esco Medical Products:

MIRI® TL6 Time-Lapse Incubator
MIRI® TL12 Time-Lapse Incubator
MIRI® Multiroom Incubator
MIRI® II-12 Multiroom Incubator
Mini MIRI® Dry Incubator
Mini MIRI® Humidity Incubator
Esco Multi-Zone ART Workstation
CelCulture® CO_2 Incubator
MIRI® GA (Gas and Temperature Validation Unit)
MIRI® AVT
Versati™ Tabletop Centrifuge
CultureCoin®

Infertility is a problem that has a significant social, psychological, and economic impact on afflicted individuals and couples. It is a global concern that knows no race or creed. It has been estimated that 1 in 6 couples struggle with infertility at least once in their lifetime.

Esco Medical is one of the divisions of the Esco Lifesciences Group. We provide innovative technological solutions for fertility clinics and laboratories. We aim to become the leading manufacturer of high-quality equipment such as long-term embryo incubators, ART workstations, anti-vibration tables, and time-lapse incubators.

Our products are designed with the Silent Embryo Hypothesis as a guiding principle. The Silent Embryo Hypothesis states that the less disturbed an embryo can remain, the better its developmental potential will be. Most of our products are designed in Denmark and made in the EU. Our primary focus is to increase pregnancy success rates and patient satisfaction.

ESCO MEDICAL®

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Designed in Denmark   Made in the E.U.

ISOCIDE™

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