Animal IVF

Equipment Overview

MIRI® Incubation System

The Top-of-the-Line Features of the MIRI® Incubation System

- **Heated Lid**
  Prevents condensation. Enhances temperature regulation.
- **Completely Independent Chambers**
  Any disruption (e.g., temperature drop after opening the lid) has zero impact on the rest of the system.
- **Direct Heat Transfer**
  Less than one minute temperature recovery.
- **A Complete Incubation Environment**
  - Has a built-in gas mixer. Premixed gas is not required.
  - Built-in pH measuring system and data logging system.

MIRI® Time-Lapse Incubator

This equipment is a CE-marked device and is in conformity with the essential requirements of the medical devices EU regulation 2017/745.

Time-Lapse Monitoring

Time-Lapse video monitoring enables detailed scoring of cultured embryos to better predict embryo development and implantation potential.

Comes in Two Variants

- MIRI® TL6: Six Individual Chambers
- MIRI® TL12: Twelve Individual Chambers

A Complete Incubation Environment

- Premixed gas is not required and cannot be used in MIRI® TL.
- Built-in pH measuring system and data logging system.

Fast Recovery

Gas recovery within three (3) minutes.

Two Temperature Mode Options

- Single - Uniform set points for all chambers.
- Multi - Individual set points for each chamber.

MIRI® Multiroom Incubator

Recirculated Gas System

The gas in the MIRI® is recirculated through a HEPA/ VOC Filtration system, which effectively removes Volatile Organic Compounds (VOCs) and particulates larger than 0.3 µm.

This equipment is a CE-marked device and is in conformity with the essential requirements of the medical devices EU regulation 2017/745.

CultureCoin®

A culture dish, exclusively designed for the MIRI® TL

One (1) MIRI® TL chamber can hold one (1) CultureCoin®. Each dish can accommodate up to fourteen (14) embryos, each with a numbered well assignment. The MIRI® TL6 can hold up to 84 embryos, and the MIRI® TL12 up to 168 embryos.

CelCulture® CO_2 Incubator

CelCulture® is equipped with a 90ºC Moist Heat Decontamination System evaluated by HPA-UK. This incubator utilizes its ULPA filter to keep the chamber at ISO Class 5 cleanliness. It offers rapid parameter recovery and has ISOCIDE™ antimicrobial coating. It can be fitted with an optional Inner Door Kit (which reduces contamination risk) and other accessories for specialized applications. In addition, it can be set up on a floor stand with casters, a roller base, or a floor stand with adjustable feet.

CelCulture® CO_2 Incubators are available in 3 sizes: 50 L, 170 L, and 240 L.

Esco Multi-Zone ART Workstation

This is the only workstation with built-in incubation chambers and a tri-gas mixer.

Multi-Zone Heating System
One set point for 10 independent zones with their own heating elements and sensors allows for excellent uniformity.

Less Noise, Less Vibrations
The Esco Multi-Zone ART Workstation's state-of-the art design and features deliver less noise and less vibrations. This makes it suitable for sensitive microscopic work.

Superior Air Cleanliness
Esco workstations provide ISO Class 3 air cleanliness within the workzone as per ISO 14644.1.

Non-radiating Stainless Steel Tabletop
The main material used in the tabletop surface is stainless steel. while aluminum is used for covering the bottom of the tabletop.

VIVA® Animal Research Containment Workstations

The Portable Safety Solution for Animal Research Laboratories

Esco's range of VIVA® animal research products are designed for laboratory research applications involving certain animals being used in experiments, typically applied in industries like animal breeding, drug development/toxicity testing, medicine/genetic therapy, biotechnology, and more.

Key Features

- Controlled inflow, down-flow and exhaust similar to Class II Type A2 biosafety cabinet technology.
- ISO Class 3 air cleanliness within work zone. This is equivalent to Class 1 per the US Federal Standard 209E, which is 100X cleaner than Class 100 classification on standard cabinets offered by other providers.
- ULPA filter technology which operates at the typical efficiency of 99.999% at MPPS, 0.3 and 0.12 microns provides better operator, product and environmental protection than conventional HEPA filters.
- Fail-safe system shuts cabinet down automatically in case of airflow failure to ensure operator and environmental safety. Esco ISOCIDE™ powder coating prevents surface bacterial growth and enhances operator safety.

It comes in 3 variations:

VDA

Dual Access Animal Containment Workstation

VA2-E

Universal Animal Containment Workstation

VBD

Bedding Disposal Animal Containment Workstation

Airstream® Gen 3 Vertical Laminar Flow Cabinet

Airstream® Vertical Laminar Flow Cabinets offer proven protection for your samples and processes where sample protection is required. It offers certain tangible advantages over horizontal flow cabinets (which may be the convention to some parts of the world), such as lower energy consumption (40% of conventional system) levels through the use of exclusive motorized impeller technology and less airflow turbulence (especially when large objects are used on the workzones). In fact, the negative pressure filter mounting system employed on these models is widely recognized to be superior to that of conventional horizontal flow cabinets.

Key Features

- ULPA Filter (ISO Class 3 Work Zone)
- ISOCIDE™ Antimicrobial Powder Coating
- Low Noise Level
- Energy Efficient
- Stable Airflow
- Comfortable Legroom

Versati™ Tabletop Centrifuge

Versati™ Tabletop centrifuge stands out among the same-level products with its versatility, running features, and easy handling. It can be used with high-capacity and low-to-high-speed general-purpose centrifuge applications. It is suitable for the sperm purification process during animal IVF because of its adjustable temperature range (-200°C to +400°C).

Key Features

- Compact Design
- Incredible Flexibility
- High Temperature Ramp Rate
- Fast Pre-cooling
- Overspeed Protection
- Over Temperature Protection

Aeris™ Conventional PCR Thermal Cycler

The Aeris™ thermal cyclers can be used for conventional PCR applications. The cycler offers the flexibility to change the thermal blocks depending on the application: from consumable PCR tubes, strips, plates, and slides. System includes excellent heating and cooling rate with accurate and uniform temperature throughout the samples.

Key Features

- Multi-block capability
- Adjustable hot lid temperature and ramp rate
- Excellent temperature accuracy and uniformity
- Can perform standalone operation
- Software allows variety of PCR conditions, can control up to 30 units via one PC
- Password protection for secure system access

MIRI® AVT (Anti-Vibration Table)

The MIRI® AVT was designed specifically for micro-manipulation procedures.

The MIRI® AVT has a mechanism for passive dampening that isolates the microscope from vibrations during Intra-Cytoplasmic Sperm Injection (ICSI) procedures.

It is constructed with a stainless steel table-top, makng it easy-to-use and almost maintenance-free.

MIRI® GA Gas & Temperature Validation Unit

The MIRI® GA is a table-top device designed to make external incubator validation easier and safer.

- Capable of monitoring the temperature (PT1000 connector) as well as gas concentration, flow, and pressure.
- Can validate up to 6 chambers simultaneously 24 hours a day.
- Has an adjustable flow rate which gives it the ability to properly sample small-volume incubation chambers.
- Comes with a full data logger software which is helpful in monitoring each parameter.

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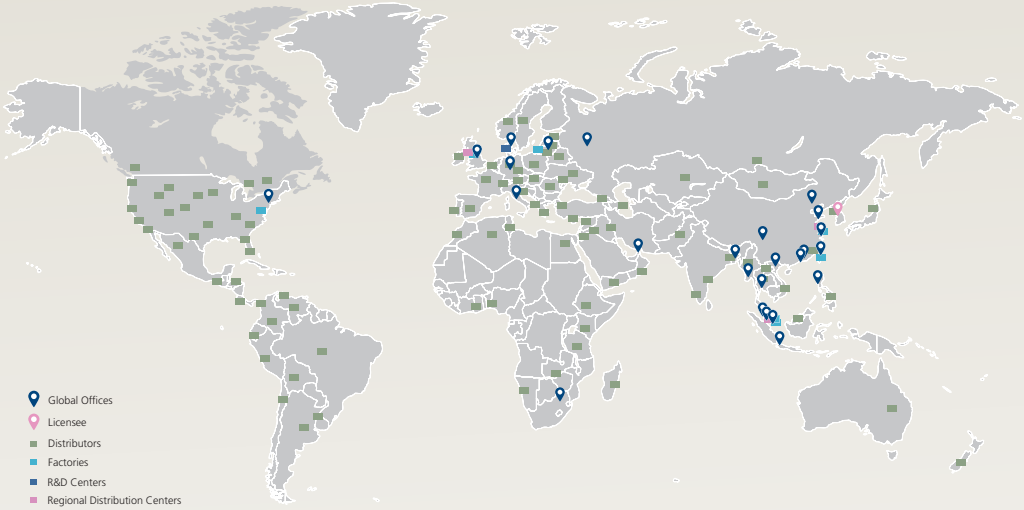

Esco Animal IVF Products:

MIRI® TL6 Time-Lapse Incubator
MIRI® TL12 Time-Lapse Incubator
MIRI® Multiroom Incubator
MIRI® GA (Gas and Temperature Validation Unit)
CelCulture® CO_2 Incubator
Esco Multi-Zone ART Workstation
MIRI® AVT
Aeris™ Conventional PCR Thermal Cycler
Versati™ Tabletop Centrifuge
Airstream® Gen 3 Vertical Laminar Flow Cabinet
VIVA® Animal Research Workstations
CultureCoin®

Biotechnology, through In vitro fertilization, is becoming an integral tool to the livestock industry to accelerate breed development for better-quality animal health and welfare, improved reproduction, and enriched nutritional quality and safety of animal-derived foods.

Esco Medical is one of the divisions of the Esco Lifesciences Group. We provide innovative technological solutions for fertility clinics, laboratories (both human and animal) and research units. 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.

ESCO MEDICAL

21 Changi South Street 1 • Singapore 486 777
Tel +65 6542 0833 • medical@escolifesciences.com
www.esco-medical.com

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