EMBRYOSCOPE TIME-LAPSE SYSTEMS

Making time-lapse a standard of care.
IMPROVE IVF TREATMENT THROUGH BETTER EMBRYO SELECTION

Time-lapse technology reduces observational time restrictions and stress to embryos during culture and assessment. With time-lapse you can enjoy undisturbed culture and continuous image acquisition and improve your selection process through a more objective analysis.

Solving the observational dilemma

The desire to observe embryos regularly in order to make accurate assessments, while minimising disturbance to avoid stressing them, has been a long-standing dilemma. Time-lapse technology solves this problem by giving you continuous observation in an undisturbed culture. Once taken, acquired images can be played as a film that can be analysed at the clinic and remotely. Without time-lapse, embryos must be taken out of the incubator to be assessed, exposing them to unnecessary stress and fluctuations.
Making time-lapse a standard of care

With the introduction of time-lapse technology, the field of assisted reproduction took a leap forward. Time-lapse monitoring systems present a significant potential in improving IVF treatment on all levels. Simultaneously, time-lapse technology introduces new opportunities in the clinic for improving workflow, quality control and communication between embryologists, clinicians and patients. Most importantly, time-lapse culture and evaluation has been proven to increase clinical outcome and reduce pregnancy loss.1-11

Time-lapse culture and evaluation improve IVF success

- Improved implantation rate
  Time-lapse improves your chances of transferring a viable embryo, resulting in increased clinical outcome.1,2,3,4,6,7,10,11

- Reduced pregnancy loss
  Selecting the most viable embryo for implantation also means reducing the percentage of pregnancies lost or aborted.2,11

- Shorter time to pregnancy
  Improving the clinical pregnancy rate while decreasing pregnancy losses effectively shortens the overall time to pregnancy.

Improved implantation rate

<table>
<thead>
<tr>
<th></th>
<th>Traditional culture and evaluation</th>
<th>Time-lapse culture and evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>37.1% (p=0.02)</td>
<td>44.9% (p=0.02)</td>
</tr>
<tr>
<td>culture and</td>
<td>n=699</td>
<td>n=775</td>
</tr>
<tr>
<td>evaluation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reduced pregnancy loss

<table>
<thead>
<tr>
<th></th>
<th>Early pregnancy loss</th>
<th>Miscarriage rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubio et al. (2014)</td>
<td>25.8% (p=0.01)</td>
<td>24.4% (p=0.19)</td>
</tr>
<tr>
<td>Barrie et al. (2016)</td>
<td>16.6%</td>
<td>18.9%</td>
</tr>
<tr>
<td>n=228</td>
<td>n=271</td>
<td>n=176</td>
</tr>
</tbody>
</table>

Improved pregnancy rate

<table>
<thead>
<tr>
<th></th>
<th>Traditional culture and evaluation</th>
<th>Time-lapse culture and evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing pregnancy rate</td>
<td>41.7% (p=0.005)</td>
<td>51.4% (p=0.41)</td>
</tr>
<tr>
<td>Clinical pregnancy rate</td>
<td>62.9%</td>
<td>68.1%</td>
</tr>
<tr>
<td>n=405</td>
<td>n=438</td>
<td>n=116</td>
</tr>
<tr>
<td>n=116</td>
<td>n=119</td>
<td></td>
</tr>
</tbody>
</table>

“One of the immediate benefits of EmbryoScope compared to traditional incubation is better culture conditions. This was the reason behind moving towards using 100% time-lapse in the center’s laboratory”

Dr. Nikica Zaninovic, Embryology Laboratory Director and Assistant Professor, Weill Medical College of Cornell University, USA
UNDISTURBED CULTURE AND TIME-LAPSE EVALUATION WORKING TOGETHER

EmbryoScope and EmbryoScope+ time-lapse systems offer improved clinical outcomes through undisturbed stable incubation and time-lapse monitoring. The world’s most used time-lapse system for IVF since 2009.

The world’s most used time-lapse system

EmbryoScope is the most widely adopted time-lapse system worldwide with documented improved clinical outcome and neonatal follow-up. The system is developed based on input from hundreds of leading scientists and is the first time-lapse system cleared for clinical use in Europe and USA. In addition to an excellently stable incubation environment, both EmbryoScope and EmbryoScope+ time-lapse systems also provide software and decision support tools designed to provide both flexibility and consistency, improving the clinic’s results and workflow.

Undisturbed stable incubation

EmbryoScope and EmbryoScope+ share the same state-of-the-art technology that enables a stable culture environment for embryos. Temperature is tightly regulated by direct heat contact and air is continuously purified through a HEPA/VOC filter. An integrated gas mixer allows the implementation of reduced oxygen conditions easily and economically. Small incubation chambers allow rapid recovery of culture conditions after door opening.

EmbryoScope has space for 6 patients with up to 12 embryos in each EmbryoSlide culture dish whereas EmbryoScope+ can hold 15 patients with up to 16 embryos in each dish.

Ensure the best possible embryo culture environment

The heart of the system is the incubator. Both EmbryoScope and EmbryoScope+ provide a stable incubation environment while high quality images of embryo development are acquired. Extensive testing has shown that light exposure in EmbryoScope systems is outside of damaging wavelengths and with much lower total light energy exposure than traditional microscopy.12
Constant time-lapse monitoring
EmbryoScope as well as EmbryoScope+ acquire images of all embryos in multiple focal planes. Both systems use high-quality Hoffman modulation contrast optics and acquire images of each individual embryo separately. This results in supreme image quality which allows observation of key morphological features. The image acquisition has been thoroughly validated to ensure safety in terms of both light wavelength and total energy exposure. Image data handling has been carefully considered to minimise data storage requirements while maintaining optimum image quality. This ensures seamless video playback.

Enjoy flexible work routines – never miss a thing
By integrating EmbryoScope technology in the IVF laboratory, a new world of efficiency and productivity opens up. A great deal of stress is reduced when assessment and evaluation of embryos is performed when it suits the task flow. With EmbryoScope technology, observations are not connected to fixed time-points, which both reduces the morning rush hour and frees up resources in the laboratory.

Tool for communication and consistency
With time-lapse information gained from EmbryoScope technology, communication is taken to a new level. Both between clinicians and embryologists, among embryologists in the lab and with patients. The level of understanding of embryo development and its dynamic process is increased, which is ideal to use when training new embryologists. Finally, time-lapse information makes standardising embryo evaluation a possibility, enhancing consistency.

“As the first clinic in the world to introduce time-lapse technology for all patients in 2010, we have seen an improvement in implantation rates while reducing multiple pregnancy rates by way of more single embryo transfer. We are confidently using EmbryoScope+ routinely for our patients. We have the same great results, with the added benefit of higher patient and embryo capacity as well as space savings in the lab.”

Medical Director John Kirk, Maigaard Fertility Clinic, Denmark
START BIG OR GO BIGGER

Optimise embryo culture and evaluation and maximise your results with either EmbryoScope or EmbryoScope+, depending on your clinic's needs and wishes.

EmbryoScope+, high capacity with a small footprint

EmbryoScope+ is designed to meet the needs of clinics wishing to implement time-lapse as a standard of care to more of their patients. EmbryoScope+ has more than double the patient capacity, compared to other bench-top time-lapse systems. The EmbryoScope+ can simultaneously acquire time-lapse videos from up to 15 patient dishes with up to 16 embryos each making it ideal for clinics who wish to offer time-lapse to all of their patients.

To improve workflow, the EmbryoSlide+ culture dishes are automatically registered using a special patient barcode labelling system. With the small footprint you will make efficient use of space, a valued asset in all labs and especially where space is limited. The large capacity in combination with a small footprint and efficient workflow provides optimised usage of clinic resources.

EmbryoSlide+
- 16 embryos/dish, 15 dishes/incubator
- Barcode labelling
- 2 x 8 embryos distinct loading areas
- 2 x 180µl medium
- 1.6 mL oil
- 4 flushing / rinsing wells
- Individually numbered wells

NEW! pH validation dish
- Silicone lid
- 3.0mL medium
- Intended for pH value measurements
- MEA tested
- For single use only

Supportive software
Time-lapse analysis of embryo development is the key to improved evaluation. Data generated from EmbryoScope+ is analysed using the flexible EmbryoViewer software which allows viewing and analysis of embryos.
EmbryoScope, the world’s most used

Based on more than a decade of experience in optimal design and a specialised knowledge of all processes involved when incubating and monitoring embryos, EmbryoScope time-lapse system continues to offer safe embryo management through a platform of products and services.

The integrated design of the EmbryoScope time-lapse incubator has been developed to ensure stable incubation while automatically acquiring images of the developing embryos at defined intervals. This information is transferred to the ES server which can then be accessed from conveniently placed EmbryoViewer stations.

Easy patient addition workflow

A patient identification barcode system offers a flexible and efficient workflow. EmbryoScope+ automatically reads and registers entry of a new patient and re-entry of an existing patient dish.

Minimal culture disturbance

The EmbryoSlide culture dish handling port is isolated from the remainder of the incubation chamber. This unique design ensures that culture conditions inside the incubator are virtually undisturbed when a patient culture dish is added or removed.

Easy and efficient gas and temperature validation

An easy to access gas sampling port is positioned at the front of the EmbryoScope+. An intuitive menu guides the process of setting and validating gas and temperature set points.

EmbryoSlide

- 12 embryos/dish, 6 dishes/incubator
- 12x25µl medium
- 4 flushing / rinsing wells
- Individually numbered wells
- Lid ensures minimal evaporation
- Handling fin for safe transfer between workplaces
With time-lapse technology, images are taken continuously as an embryo develops. The resulting film sequence can reveal critical events that are often missed in the “snap-shot” glimpses of conventional microscopy, allowing you to make more informed decisions. EmbryoViewer software allows you to perform advanced embryo analysis to improve selection of embryos most suited for transfer and cryopreservation.

**Get the most information to make the best choice**

Traditional evaluation of embryos limits the amount of information about embryo development. Using time-lapse analysis, you can detect previously unseen embryo development patterns and events which have been correlated to clinical outcome. With EmbryoViewer software, you can analyse high quality videos of embryo development and easily enter information which facilitates side by side comparison and ranking of embryo quality.
See what you’ve been missing

With EmbryoViewer software, you can achieve improved selection, or de-selection, of embryos by a combination of discovering both morphological and morphokinetic parameters. Important parameters such as the dynamic morphology, critical cleavage patterns and morphokinetics can only be observed with time-lapse technology.

Traditional embryo assessment has been reported to miss more than 70% of embryo multinucleation while more than 20% of embryos have been reported to go through an abnormal cleavage pattern. Such patterns can only be precisely determined by the use of time-lapse.13-16

- Standard evaluation misses up to 72.4% of multinucleated embryos13-14
- Up to 26% of embryos go through an abnormal cleavage pattern15-16

Ensure consistency with annotations

Registering embryo traits with the specific time of occurrence enables the transition from analogue assessment to assessment by digital information. For embryo evaluation, digital information has the advantage of being more precise and less risk of subjectivity. This sets the basis for consistent evaluation.

Transferred embryos retrospectively checked for multinucleation (MN) at 2-cell stage by time-lapse images. Only 27.6% of multinucleated embryos were identified within traditional time limits for embryo assessment (n=159). Multinucleation significantly reduced clinical pregnancy rate and implantation rate.

Effect of multinucleation

<table>
<thead>
<tr>
<th></th>
<th>Clinical pregnancy</th>
<th>Implantation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MN</td>
<td>23.4</td>
<td>23.3</td>
</tr>
<tr>
<td>No MN</td>
<td>44</td>
<td>43.6</td>
</tr>
</tbody>
</table>

\[ p=0.001 \]


Time-lapse expands your evaluation capabilities

Observe changes in morphology in near real-time

Identify abnormal cleavage patterns as they occur

Monitor morphokinetics

MN

No MN

Transferred embryos retrospectively checked for multinucleation (MN) at 2-cell stage by time-lapse images. Only 27.6% of multinucleated embryos were identified within traditional time limits for embryo assessment (n=159). Multinucleation significantly reduced clinical pregnancy rate and implantation rate.

Advanced software

With EmbryoViewer software, you can review, annotate and compare development of selected embryos from data acquired by the EmbryoScope and EmbryoScope+. The same EmbryoViewer software can be used for both types of incubators. The incubators’ running conditions are automatically stored with the patient data and can be observed on the EmbryoViewer software for quality assurance.

Intuitive annotation tools

With EmbryoViewer software, you can annotate cell division events, providing an easy overview of observations in developmental stages.
**Improved basis for embryo selection**

View and compare all of patient’s embryos from an EmbryoSlide culture dish at the same time. Select a single embryo for annotation or use “View slide” to perform a side-by-side comparison of all embryos in a culture dish.

**Assisted embryo selection**

With EmbryoViewer software, you also have the possibility to set up one or more models according to clinic specific criteria and rank embryos accordingly using the Compare & Select feature. With the possibility to define selection, deselection or information criteria and even user defined variables, you can create customised models with criteria fitting your own clinical data.

**Improved workflow with ES server**

When introducing EmbryoScope and/or EmbryoScope+ to your IVF laboratory, you are guaranteed a digital transformation in the workflow. With the ES server, you can access the time-lapse data from all connected EmbryoScope and EmbryoScope+ incubators. Moreover, it is possible to view the data from multiple EmbryoViewer workstations. These can be placed in the IVF laboratory or in your office, and you can even access the data stored on the server from another clinic or another remote location using a secure connection. This enables you and your colleagues to view, annotate and select embryos with geographical flexibility.

**NEW! Electronic Medical Record integration**

EmbryoScope can be integrated with all compatible EMR systems.
ADD INTELLIGENCE WITH GUIDED ANNOTATION

Guided Annotation is an added, optional tool in the EmbryoViewer software designed to provide a simplified annotation workflow. The intelligent annotation system jumps to likely division timings based on our unique blastomere activity measurements – you simply confirm the event with the press of a button.

Ensure consistent evaluation of embryos with Guided Annotation

The EmbryoViewer software allows you to observe each embryo through every stage of development from data acquired by the EmbryoScope time-lapse system. It is here this information is annotated in order for you to evaluate which embryos are most suitable for transfer and/or freezing.

The software’s proprietary blastomere activity chart has been utilised to rapidly identify cell division events in order to simplify annotation. This chart is calculated for each embryo using an advanced image analysis program.

The Guided Annotation tool uses this image analysis to guide you to likely timings for developmental events like division timings, morphology assessment and PN check. Simply validate or score the event by a single keyboard click.

Eased workflow, efficiency and consistency

- **Simplicity**
  Based on the annotation strategy, Guided Annotation automatically prompts you to annotate the selected variables. A continuous overview of the process is provided.

- **Efficiency**
  An efficient workflow is easily achieved by utilising customised annotation strategies in combination with the intuitive and ergonomics friendly keyboard shortcuts.

- **Consistency**
  Define an annotation strategy, or determine which predefined annotation strategy to use, and collect consistent and valuable information by all staff.

Blastomere activity chart

Guided Annotation in synergy with KIDScore optimally supports your consistent embryo evaluation process.
Follow an annotation strategy

At the core of the tool lies a user defined annotation strategy. It indicates which variables you should annotate and in which order. Once a strategy has been defined, the tool guides you through the process of performing the actual annotations:

1. All variables included in the selected annotation strategy are automatically presented to you together with an image of the current embryo.
2. The image series is automatically forwarded to an estimated point in time where the annotation process may start.
3. You complete the step by evaluating the embryo and performing the actual annotation.
**KIDSCORE™ DECISION SUPPORT TOOL**

KIDScore assigns an objective score to each embryo. The scores reflect implantation potential and provide consistent and effective support for embryo selection.

### KIDScore for transfer on Day 3 or Day 5

The KIDScore decision support tool is developed by analysing the world’s largest database of embryo development with known clinical outcome. The models are developed by analysing how embryo morphokinetics, cleavage patterns and morphology correlates with implantation outcome after transfer.

### Benefits of KIDScore

- Improves the decision-making process
- Enhances consistency
- Helps you obtain better results

### Principles of KIDScore D3

<table>
<thead>
<tr>
<th>Implantation</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of a morphokinetic variable</td>
<td>Low implantation</td>
</tr>
</tbody>
</table>

### Enjoy immediate benefits of time-lapse-based embryo analysis

- Improved consistency of evaluation and lower interobserver variability
- Uses ‘easy-to-annotate’ variables
- Based on Known Implantation Data (KID) from the day of transfer
- A powerful tool when you have more embryos available than planned for transfer
- Designed to predict implantation
KIDScore D3

When to use it
• When deciding between embryos that reach expected stage on day 3
• When D3 SET is preferred

How does it work?
KIDScore D3 assigns a morphokinetic score from 1-5 to your annotated embryos. The score from 1-5 is a relative measure of the implantation potential of the embryo. The following variables need to be annotated in accordance with specific guidelines: PN assessment, PN fading, time (t) to 2, 3, 4, 5 and 8 cells.

KIDScore D3 & implantation data
The chart represents unselected embryos, embryos chosen for transfer, implanted embryos and embryos resulting in a live birth from cycles where known outcome data is available. The distribution of embryos across score groups is shown. This indicates that there is excellent concordance between the model and embryos with high implantation potential.

KIDScore D5

When to use it
• When more good quality blastocysts are available than are planned for transfer
• When deciding which embryos are suitable for biopsy or diagnosis

How does it work?
KIDScore D5* considers the morphology and the morphokinetic traits of an embryo. For each embryo the model calculates a continuous score from 1-9.9. The score reflects the statistical chance of implantation based on development information from the five-day culture period. The higher the score, the greater the statistical chance of implantation. Only a few annotations are required to obtain a score, which further improves the workflow.

KIDScore D5 & implantation data
KIDScore D5 scores show an increased relative implantation with higher scores. The model is based on a large database of KID blastocysts originating from a wide range of IVF clinics.

*KIDScore D5 can only be used when culturing under reduced oxygen conditions
Time-lapse embryo development videos support your communication

Not only does time-lapse increase communication between clinical staff, it also advances patient communication. Embryo development videos can be used to show patients why a cycle may have failed when only poor quality embryos are available. They can also show patients who have many good quality embryos that single embryo transfer is a good option. Or they can give them hope that their good quality frozen embryos may offer them a second chance.

The EmbryoScope Counseling App offers the capability of educating your patients about embryo development. Moreover, the app offers the ability to show patients the videos of how their own embryos developed in both the EmbryoScope and the EmbryoScope+ time-lapse incubators.

Educate and interact with your patients with EmbryoScope Counseling app

- An ideal tool for patient consultation
- Guide patients through the EmbryoScope time-lapse system treatment benefits versus traditional incubation
- Show examples of good and poor developing embryos
- Log in to show patients how their own embryos have developed

Find the “EmbryoScope Counseling App” on the App Store on your iPad and get free access to the app’s main features.

The capability of showing patients their own embryos requires an annual ES server connection license for each device used.

Inform patients about their IVF treatment and development of their embryos with the EmbryoScope Counseling App.
EXTENSIVE TRAINING AND SUPPORT

Get the most from your investment. With extensive experience from IVF labs around the world we can provide you with extensive support and training, to get you started and help you utilise time-lapse to its fullest potential.

Installation by a certified instructor
When you have invested in an EmbryoScope time-lapse system, a certified instructor from Vitrolife will install the system in your clinic. During the installation, we provide a thorough, interactive demonstration of the system and education in using its functions with the focus of training you to use it to its full potential.

24-hour support
Half-yearly service visits ensure the continuous, optimal performance of all instrument components. Also, a 24-hour technical support is at your disposal via our customer hotline, which responds to all issues relating to your EmbryoScope time-lapse system. Both the half-yearly service visits and access to the 24-hour technical support require a maintenance agreement.

Online scientific support
You also have the possibility to advance your time-lapse use with Vitrolife’s online scientific support for time-lapse application. Online scientific support focuses on your practical use of time-lapse technology in all parts of your clinic’s workflow and on the scientific basis that this builds on. An online session will be designed to target the issues relevant to your needs and can include information sharing, demonstrations and questions & answers.

Each online session is set up for your individual clinic.
<table>
<thead>
<tr>
<th>Instrument</th>
<th>EmbryoScope™ time-lapse incubator</th>
<th>EmbryoScope+ time-lapse incubator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Six (6) disposable EmbryoSlide® culture dishes holding 12 embryos each</td>
<td>Fifteen (15) disposable EmbryoSlide+ culture dishes holding 16 embryos each</td>
</tr>
<tr>
<td>Operation</td>
<td>Individual culture dishes may be inserted and removed independently</td>
<td>Individual culture dishes may be inserted and removed independently</td>
</tr>
<tr>
<td>Patient data</td>
<td>Entered manually</td>
<td>Read automatically from barcode</td>
</tr>
<tr>
<td>Dimensions</td>
<td>W x D x H (60.3 x 56.0 x 43.5) cm / (23.7 x 22 x 17.2) in</td>
<td>W x D x H (55 x 60 x 50) cm / (21.7 x 23.6 x 19.7) in</td>
</tr>
<tr>
<td>Weight</td>
<td>60 kg / 121 lbs</td>
<td>50 kg / 110 lbs</td>
</tr>
<tr>
<td>Input voltage</td>
<td>Versions compatible with different regional voltages available</td>
<td>Versions compatible with different regional voltages available</td>
</tr>
<tr>
<td>Power consumption</td>
<td>Max 250 W, typical 95W</td>
<td>Max 250 W, typical 95 W</td>
</tr>
<tr>
<td>Operating range</td>
<td>20 °C – 30 °C</td>
<td>20 °C – 28 °C</td>
</tr>
<tr>
<td>Alarm system</td>
<td>Monitoring of incubation conditions and subcomponent integrity; audible and visible alerts when incubation conditions are out of range.</td>
<td>Monitoring of incubation conditions and subcomponent integrity; audible and visible alerts when incubation conditions are out of range.</td>
</tr>
<tr>
<td>Image acquisition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focal planes</td>
<td>Up to seventeen (17) focal points at each time point</td>
<td>Eleven (11) focal points at each time point</td>
</tr>
<tr>
<td>Built-in microscope</td>
<td>Leica 20x, NA 0.40 LWD Hoffman modulation contrast objective lens</td>
<td>Custom designed 16x, NA 0.50, LWD Hoffman modulation contrast objective lens</td>
</tr>
<tr>
<td>Camera resolution</td>
<td>1280 × 1024 pixels, 3 pixels per µm, monochrome, 8-bit</td>
<td>2.2 MP, 3 pixels per µm, monochrome, 12-bit</td>
</tr>
<tr>
<td>Embryo illumination</td>
<td>≤ 0.032s per image using single red LED (635nm) gives 43 J m⁻² for image acquisition (5 day culture)</td>
<td>≤ 0.020s per image using single red LED (630nm) gives 42 J m⁻² for image acquisition (5 day culture)</td>
</tr>
<tr>
<td>Time between acquisitions</td>
<td>10 min. cycle time for 7 focal planes, 2 min cycle time with single focal plane</td>
<td>10 min. cycle time for 11 focal planes</td>
</tr>
<tr>
<td>Tri-gas incubator, integrated in instrument</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
<td>30 °C to 45 °C ± 0.2 °C*</td>
<td>36 °C to 39 °C ± 0.2 °C</td>
</tr>
<tr>
<td>* Temperature range: Temperature set-point must be at least 7 °C above ambient temperature and ambient temperature must be less than 30 °C.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen</td>
<td>5 % to 20 % ± 0.3 %</td>
<td>4 % to 8 % ± 0.5 % or ambient</td>
</tr>
<tr>
<td>N₂ consumption</td>
<td>At 5 % O₂: &lt;20L/h</td>
<td>Max 5 L/hr, typical 2-3 L/hr</td>
</tr>
<tr>
<td>CO₂</td>
<td>2 % to 10 % ± 0.2 %</td>
<td>3 % to 8 % ± 0.3 %</td>
</tr>
<tr>
<td>CO₂ consumption</td>
<td>At 5 % CO₂: &lt;1 L/h (without reduced O₂. With reduced O₂ consumption at 5 % is &lt;2 L/h)</td>
<td>Max 2 L/hr, typical 0.5 L/hr</td>
</tr>
<tr>
<td>Active air circulation</td>
<td>Full purification of gas volume every 20 minutes</td>
<td>Full purification of gas volume every 6 minutes</td>
</tr>
<tr>
<td>Volatile organic compounds</td>
<td>Removed by active carbon filter</td>
<td>Removed by active carbon filter</td>
</tr>
<tr>
<td>Particles</td>
<td>Removed by HEPA filter which retains 99.97 % particles &gt;0.3 µm</td>
<td>Removed by HEPA filter which retains 99.97% particles &gt;0.3 µm</td>
</tr>
<tr>
<td>Data acquisition, Intel based fanless embedded PC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network</td>
<td>100 Mb Ethernet</td>
<td>1 Gb Ethernet</td>
</tr>
<tr>
<td>Operating system</td>
<td>Microsoft Windows®</td>
<td>Microsoft Windows Embedded</td>
</tr>
<tr>
<td>Data format for images</td>
<td>JPEG</td>
<td>JPEG</td>
</tr>
<tr>
<td>Monitor</td>
<td>12.1&quot; embedded touch screen</td>
<td>10.1&quot; capacitive touch screen</td>
</tr>
</tbody>
</table>

Europe: CE-marked class Ila medical device. USA: FDA 510(k) clearance. Europe: CE-marked class Ila medical device. This product has not received 510(k) clearance.
**EmbryoSlide® culture dish**

**Micro well culture**
Twelve (12) numbered wells for incubation of individual embryos in droplets with 25 µl medium.
Four (4) wells for flushing of embryos. No need for humidified environment.

**Microscopy**
Fully compatible with standard and inverted microscopes

**Size**
Standard dish format (25 × 75 mm)

**Packaging**
Dishes packed individually with lid in sterile pouche. 2D barcode for batch specification.

**Sterilisation method**
E-beam sterilised according to ISO 11137 with SAL 10^-6. Single use, sterile.

**Toxicity test**
Embryotoxicity tested with 1-cell mouse embryos – minimum 80% expanded blastocysts after 96 hrs. Cytotoxicity test according to ISO 10993-5. Non-pyrogenic.

**Labelling**
Barcode labels not supported

Europe: CE-marked class IIa medical device.
USA: FDA 510(k) clearance.

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**EmbryoSlide+ culture dish**

**Micro well culture**
Sixteen (16) numbered wells for incubation of individual embryos in reservoirs of 2 x 180µl medium.
Four (4) wells for flushing of embryos. No need for humidified environment.

**Microscopy**
Fully compatible with standard and inverted microscopes

**Size**
Dish size (50 × 70 mm)

**Packaging**
Dishes packed individually with lid in sterile pouche. 2D barcode for batch specification.

**Sterilisation method**
E-beam sterilised according to ISO 11137 with SAL 10^-6. Single use, sterile.

**Toxicity test**
Embryotoxicity tested with 1-cell mouse embryos – minimum 80% expanded blastocysts after 96 hrs. Cytotoxicity test according to ISO 10993-5. Non-pyrogenic.

**Labelling**
MEA tested barcode labels for automatic patient registration.

Europe: CE-marked class IIa medical device.
This product has not received 510(k) clearance.

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**EmbryoViewer® software**

**PC**
Powerful small form factor PC

**Dimensions**
W x D x H (3.5 x 18.0 x 18.0) cm / (1.4 x 7.1 x 7.1) in

**Display dimensions**
W x D x H (58.0 x 21.0 x 42.0) cm / (22.8 x 8.3 x 16.5) in

**Weight**
1.3 kg / 2.8 lbs

**Input voltage**
110-240 V AC

**Jog wheel**
Delivered with for ease of video replay

**Data export**
Patient and annotation data can be exported to Excel format for further data processing

**Image export format**
JPEG

**Video export format**
AVI

Europe: CE-marked class I medical device.
USA: FDA 510(k) clearance.

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**ES server**

**Dimensions**
W x D x H (17.5 x 47.52 x 36.82) cm / (6.9 x 18.7 x 14.5) in

**Weight**
18.96 kg / 41.79 lbs

**Input voltage**
AC 120/230 V (50/60 Hz)

**Capacity**
Typically 2500 treatments (upgradable). Depends on image aquisition settings.

Europe: CE-marked class I medical device.

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* Design protected
Time-lapse by Vitrolife – everything you need

Vitrolife has everything your clinic needs to maximise time-lapse culture and evaluation, including time-lapse monitoring systems and a specially formulated culture medium. Whether you want to start with an integrated time-lapse system, complement your current set-up or start with a modular solution like Primo Vision EVO+, you can feel confident partnering with us.

Optimise all the way

Optimised for time-lapse technology, G-TL provides optimal culture conditions, maximising embryo viability. Time-lapse technology has allowed IVF professionals to minimise handling stress. In order to take this concept to the next level, a culture media has been developed specifically to support fully undisturbed embryo culture conditions. G-TL was the first single step culture medium specifically designed and validated to support human embryo culture in a time-lapse environment.

In addition, OVOIL provides the perfect overlay to prevent evaporation. The high quality makes it ideal for the challenges presented by extended culture conditions.