



The micro-Insert 4 Well FulTrac is a biocompatible, silicone insert ideal for long-term, single-cell microscopy analysis. The micro-Insert has a special sticky bottom that prevents leaking on smooth, dry surfaces, such as microscopy slides and dishes. The circular, cone-shaped format of each well allows adherent or non-adherent cells placed into the wells to sink to the bottom. Whole-well imaging can be achieved with a 20× objective.

The conical-shaped wells provide excellent optical access to cells located near the edges of the well. After cell attachment, the micro-Insert can be removed by using sterile tweezers without leaving a residue.

Material

The micro-Insert 4 Well FulTrac is manufactured from biocompatible silicone. Although, the material is autoclavable and compatible to alcohols, reuse is not recommended.

Please note! When using an ibidi μ-Dish, μ-Slide or μ-Plate, make sure that the ibidi Polymer Coverslip is compatible with the immersion oil you intend to use. See page 2 for the list of compatible oils.

Geometry

Geometry of the micro-Insert 4 Well FulTrac

Number of wells	4
Well diameter	0.4 mm
Growth area per well	0.0012 cm ²
Coating area per well	0.188 cm ²
Insert diameter	12 mm
Height	4.3 mm
Volume small well	10 μl
Volume complete Insert	150 μl

We recommend using the micro-Insert 4 Well FulTrac in ibidi μ-Dishes, μ-Slide 2 Well, 6-well plates, 12-well plates or large Petri dishes. They can also be used on sterile glass coverslips or glass slides.

Shipping and Storage

The μ-Slides, μ-Dishes and μ-Plates are sterilized and welded in a gas-permeable packaging. The shelf life under proper storage conditions (in a dry place, no direct sunlight) is listed in the following table.

Conditions

Shipping conditions	Ambient
Storage conditions	RT (15-25°C)

Shelf Life of Different Surfaces

ibiTreat, Glass Bottom, ESS	36 months
Collagen, Poly-L-Lysine	18 months

Surfaces and Coatings

The micro-Inserts can be transferred to any flat, clean, and dry surface. Use sterile tweezers for transfer and gently push the Insert in place. Note that only the bottom side is sticky. The micro-Insert 4 Well FulTrac does not work on wet or damp surfaces. Uneven or dusty surfaces might also be problematic.

Tip:

Check whether the micro-Insert is completely attached to the surface. If not, gently push the Insert.

Preliminary Insert Preparation

Filling the wells of the micro-Insert 4 Well FulTrac before preliminary preparation increases the risk of air bubble formation because of the small well size and the hydrophobic silicone surface. Optional preparation methods are detailed below:

- **Centrifugation:** Apply 10 μl cell culture medium into each well of the micro-Insert. Place the Insert into a centrifuge and centrifuge for one minute (~1500 ×g). The μ-Dish Microscopy Rack may be used as adapter to position the μ-Dish in the centrifuge.
- **Vacuum degassing:** Place the Insert inside a vacuum desiccator. Connect the desiccator to a vacuum pump and apply a vacuum for at least 2 minutes. Remove the Insert from the desiccator and pipette 10 μl cell culture medium into each well.
- **Vortexing:** Apply 10 μl cell culture medium into each well of the Insert. Vortex the Insert. Spillage of medium might occur.

Instructions

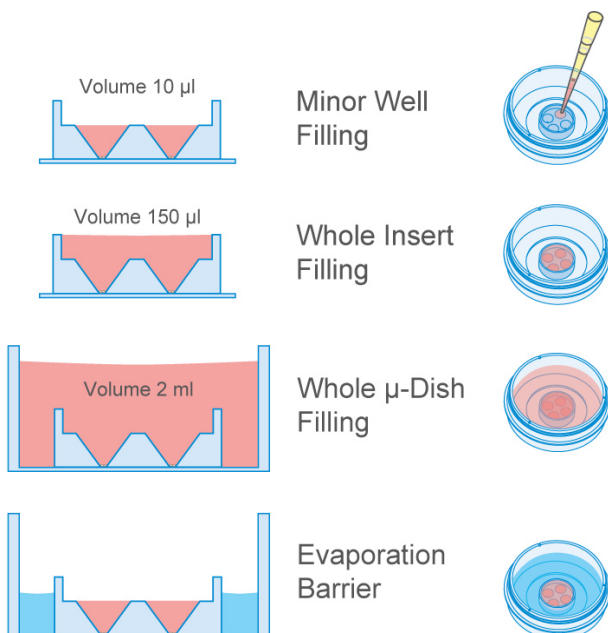
micro-Insert 4 Well FulTrac

- Pipetting: Air bubbles can also be removed by pipetting.

After Insert preparation, place the filled micro-Insert 4 Well FulTrac in the cell culture incubator. After a couple of minutes, check that all air bubbles were removed. Place the Inserts back in the cell culture incubator until you are ready to add the cell suspension.

Seeding Cells

- Prepare your Insert as explained in the "Preliminary Insert Preparation" section to minimize the risk of air bubbles.
- Prepare your cell suspension.
- Remove the pre-filled cell culture medium completely from the well.
- Add 10 µl of the cell suspension into each well. Avoid shaking as this will result in an inhomogeneous cell distribution.
- Incubate at 37°C and 5% CO₂.
- If desired, fill the outer area with cell suspension, cell culture medium or buffer.
- Check the wells for air bubbles and conduct your experiment.



Tip:

In case evaporation effects occur, a buffer can be pipetted around the Insert as evaporation barrier.

Microscopy in the micro-Insert 4 Well FulTrac

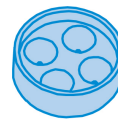
Depending on the camera and microscope setup, the whole well can be imaged. With a standard setup, this is possible at least up to the 20× objective.

Medium or serum particles might disturb your microscopic image due to sedimentation and fluidic focusing in the micro-Insert 4 Well FulTrac. Filtration or centrifugation (use supernatant only) of the culture medium can help to overcome this effect.

micro-Insert Selection Guide

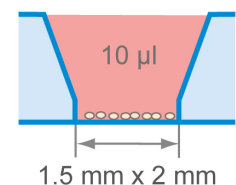
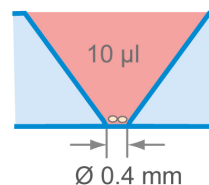
micro-Insert 4 Well FulTrac

micro-Insert 4 Well



- Single cells
- 20x Objective lens for full-well coverage
- High-resolution fluorescence microscopy

- Few cells
- 4x Objective lens for full-well coverage
- High-resolution fluorescence microscopy



Immersion Oil

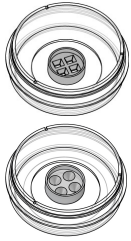
When using oil immersion objectives, use only the immersion oils specified in the table. The use of a non-recommended oil could damage the plastic material and the objective.

Company	Product	Ordering Number
Zeiss	Immersol 518 F	(Zeiss) 444960
Zeiss	Immersol W 2010	(Zeiss) 444969
Leica	Immersion liquid	(Leica) 11513859

Ordering Information

The micro-Insert is available with different well geometries and in various product versions.

micro-Insert in μ -Dish^{35mm, high}



Cat. No.	Description
80406	micro-Insert 4 Well in μ-Dish^{35mm, high} ibiTreat: ready to use, tissue culture treated, sterilized
80486	micro-Insert 4 Well FulTrac in μ-Dish^{35mm, high} ibiTreat: ready to use, tissue culture treated, sterilized

25 micro-Inserts for self insertion



Cat. No.	Description
80409	25 micro-Inserts 4 Well for self insertion: in a 10 cm transport dish sterilized
80489	25 micro-Inserts 4 Well FulTrac for self insertion: in a 10 cm transport dish sterilized

For research use only!

Further technical specifications can be found at www.ibidi.com. For questions and suggestions please contact us by e-mail info@ibidi.de or by telephone +49 (0)89/520 4617 0. All products are developed and produced in Germany.
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