

The ibidi product family is comprised of a variety of μ-Slides and μ-Dishes, which have all been designed for high-end microscopic analysis of fixed or living cells. The high optical quality of the material is similar to that of glass, so you can perform all kinds of fluorescence experiments with uncompromised resolution and choice of wavelength. The μ-Slide 8 Well is an array of 8 square fields where cells can be cultivated and, subsequently, investigated with microscopical methods. It is intended for the optimization of experimental parameters like antibody dilution, seeding density, or the most effective drug concentration.

Material

ibidi μ-Slides, μ-Dishes, and μ-Plates are made of a plastic that has the highest optical quality. The polymer coverslip on the bottom exhibits extremely low birefringence and autofluorescence, similar to that of glass. Also, it is not possible to detach the bottom from the upper part. The μ-Slides, μ-Dishes, and μ-Plates are not autoclavable, since they are only temperature-stable up to 80°C/175°F. Please note that gas exchange between the medium and incubator's atmosphere occurs partially through the polymer coverslip, which should not be covered.

Optical Properties ibidi Polymer Coverslip

| | |
|---------------------------------|-------------------|
| Refractive index n_D (589 nm) | 1.52 |
| Abbe number | 56 |
| Thickness | No. 1.5 (180 μm) |
| Material | polymer coverslip |

Please note! The ibidi polymer coverslip is compatible with certain types of immersion oil only. A list of suitable oils can be found on page 2.

Geometry

The μ-Slide 8 Well provides standard slide format according to ISO 8037/1.

Geometry of μ-Slide 8 Well

| | |
|---------------------------------|---------------------|
| Number of wells | 8 |
| Dimensions of wells (w × l × h) | 9.4 × 10.7 × 6.8 mm |
| Growth area per well | 1.0 cm ² |
| Coating area per well | 2.2 cm ² |
| Recommended filling volume | 300 μl per well |
| Total height with lid | 8 mm |
| Bottom matches coverslip | No. 1.5 |

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 |

μ-Slide Surfaces

Depending on the type of cells and the special application you are using, you will need μ-Slides with different surfaces. If you do not require any special adhesion molecules for your application, the best choice will be ibiTreat, a tissue culture treated surface.

The uncoated μ-Slide is manufactured from hydrophobic plastic. For the cultivation of most cell lines, it is indispensable to treat the uncoated μ-Slide with biopolymers, which mediate cell adhesion and growth.

The μ-Slide 8 Well is also provided with a Collagen and a Poly-L-Lysin coated surface. Such an adhesion substrate has been shown to stimulate the adhesion and growth of various cell lines in μ-Slides. A high quality Collagen IV solution (Corning #356233) and Poly-L-Lysin solution (Sigma #P4832) is used to pre-coat the slides.

Coating your μ-Slide 8 Well

The uncoated μ-Slide must be coated to promote cell adhesion. If you want to establish a certain coating to match your needs, we recommend testing your coating procedure on both uncoated and ibiTreat μ-Slides, since we

have observed that some biomolecules adhere differently to hydrophobic and hydrophilic plastic surfaces.

1. Prepare your coating solution according to the manufacturer's specifications or reference.
2. Apply 300 μl and leave at room temperature for at least 30 minutes.
3. Aspirate the solution and wash with the recommended protein dilution buffer.
4. Optionally let dry at room temperature. Attention, some coating proteins might degenerate when drying!

Detailed information about coatings is provided in [Application Note 08 Cell culture coating](#).

Undemanding cells can be left in their seeding medium for up to three days and grow to confluence there. However, best results might be achieved when the medium is changed every 1–2 days. Carefully aspirate the old medium and replace it by 300 μl fresh medium per well.

Tip:

As you may know from 96 well plates, the bent meniscus at the air-liquid interphase in small open wells destroys the phase contrast effect of your microscope image. To avoid this problem, we recommend using our channel Slides such as the μ-Slides I Luer and μ-Slide VI^{0.4} or a Ph+ Slide.

Seeding Cells

- Trypsinize and count cells as usual. Dilute the cell suspension to the desired concentration. Depending on your cell type, application of a $5-11 \times 10^4$ cells/ml suspension should result in a confluent layer within 2–3 days.
- Apply 300 μl cell suspension into each well of the slide. Avoid shaking as this will result in inhomogeneous distribution of the cells.
- Cover the slide with the supplied lid. Incubate at 37°C and 5% CO₂ as usual.

Preparation for Cell Microscopy

To analyze your cells, no special preparations are necessary. Cells can be observed live, or fixed directly in the μ-Slide on an inverted microscope. You can use any fixative of your choice. The μ-Slide material is compatible with a variety of chemicals, e.g., PFA, acetone or methanol. Further specifications can be found at www.ibidi.com. Due to the thin bottom of only 180 μm, high resolution microscopy is possible.

Immersion Oil

When using oil immersion objectives, use only the immersion oils specified in the table below. The use of a non-recommended oil could damage the ibidi polymer cover slip. The resulting leakage may harm objectives and microscope components. All immersion oils that are not listed in the table below should be considered not-compatible.

| Company | Product | Ordering No. | Lot Number | Test Date |
|-----------|------------------------|---------------|------------|-----------|
| ibidi | ibidi Immersion Oil | 50101 | 16-12-27 | 01/2017 |
| Zeiss | Immersol 518 F | 444960 | 160706 | 01/2017 |
| Zeiss | Immersol W 2010 | 444969 | 101122 | 04/2012 |
| Leica | Immersion Liquid | 11513859 | n.a. | 03/2011 |
| Cargille | Type A | 16482 | 100592 | 01/2017 |
| Cargille | Type HF | 16245 | 92192 | 01/2017 |
| Olympus | Silicone Immersion Oil | SIL300CS-30CC | N4190800 | 01/2017 |
| Carl Roth | Immersion oil | X899.1 | 414220338 | 01/2017 |

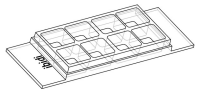
Selected References

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Ordering Information

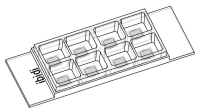
The μ-Slide 8 Well family comprises Slides with different surfaces and bottom characteristics. See table below for choosing your μ-Slide 8 Well.

μ-Slide 8 Well



| Cat. No. | Description |
|----------|--|
| 80826 | μ-Slide 8 Well ibiTreat: #1.5 polymer coverslip, tissue culture treated, sterilized |
| 80822 | μ-Slide 8 Well Collagen IV: #1.5 polymer coverslip, sterilized |
| 80824 | μ-Slide 8 Well Poly-L-Lysine: #1.5 polymer coverslip, sterilized |
| 80821 | μ-Slide 8 Well Uncoated: #1.5 polymer coverslip, hydrophobic, sterilized |
| 80827 | μ-Slide 8 Well Glass Bottom: 1.5H (170 μm ±5 μm) D 263 M Schott glass, sterilized |

μ-Slide 8 Well Grid-500



| Cat. No. | Description |
|------------|--|
| 80826-G500 | μ-Slide 8 Well ibiTreat Grid-500: #1.5 polymer coverslip, tissue culture treated, grid repeat distance 500 μm, sterilized |
| 80821-G500 | μ-Slide 8 Well Uncoated Grid-500: #1.5 polymer coverslip, hydrophobic, grid repeat distance 500 μm, 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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