

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-Dish 35 mm, high allows you to perform high resolution microscopy in a 35 mm Petri-dish with 12 mm walls. The standard height allows convenient liquid handling. The lid can be closed to hinder evaporation during long term experiments.

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 3.

Geometry

Geometry of the μ-Dish 35 mm, high

| | |
|---------------------------|---------------------|
| Diameter dish | 35 mm |
| Volume | 2000 μl |
| Growth area | 3.5 cm ² |
| Diameter growth area | 21 mm |
| Coating area using 400 μl | 4.1 cm ² |
| Height with / without lid | 14 mm / 12 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 | |
| ibiTreat, Uncoated | 36 months |

Surface and Coating

The μ-Dish 35 mm, high is available with ibiTreat and uncoated surface. The ibiTreat surface is a physical treatment and optimized for adhesion of most cell types. Many cell lines as well as primary cells were tested for good cell growth. The uncoated surface is a very hydrophobic surface and allows no direct cell growth. It is suitable for specific coatings or suspension cells.

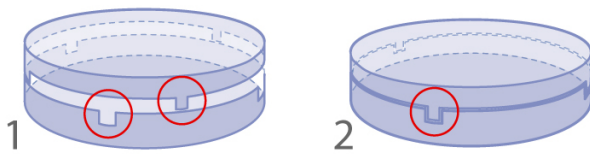
If you like to establish a particular coating for your demands we recommend to test your coating procedure on uncoated and ibiTreat μ-Dishes, since some biomolecules adhere differently to hydrophobic or hydrophilic plastic surfaces.

- Prepare your coating solution according to the manufacturer's specifications or reference. Prepare your μ-Dish, ibiTreat or uncoated. Adjust the concentration to a coating area of 4.2 cm² and 400 μl.
- Apply 400 μl into the growth area. Make sure that the entire bottom is covered with liquid easily tilting or shaking the μ-Dish. Put on the lid and leave at room temperature for at least 30 minutes.
- Aspirate the solution and wash. Optionally, let dry at room temperature.

Detailed information about coatings is provided in Application Note 08 "Cell culture coating".

The μ-Dish 35 mm, high is also available with an elastically supported surface (ESS) and a glass bottom surface.

Using The Lid



1. Open position, easy opening
2. Close position, for long term studies, minimal evaporation

Seeding Cells

Depending on your cell type, application of a $4-9 \times 10^4$ cells/ml suspension should result in a confluent layer within 2-3 days.

- Trypsinize and count cells as usual. Dilute the cell suspension to the desired concentration.
- Apply 400 μl cell suspension into the inner well of the μ-Dish. Avoid shaking as this will result in inhomogeneous distribution of the cells.
- After cell attachment add additionally 1.6 ml of pure medium to ensure optimal grow conditions.
- Cover the μ-Dish with the supplied lid. Incubate at 37°C and 5% CO₂ as usual.

We recommend not to fill more than the indicated total volume into the μ-Dish 35 mm, high in order to avoid the liquid contacting the lid.

Undemanding cells can be left in their seeding medium for several days and grow to confluence there. However, best results are achieved when the medium is changed every 2-3 days. Carefully aspirate the old medium and replace it by up to 2 ml fresh medium.

Tip:

You can stack the μ-Dishes to save space in your incubator. This will not affect cell growth. We recommend making batches with up to 6 μ-Dishes, due to stability reasons. Placing the μ-Dishes into larger Petri dishes simplifies transport and prevents evaporation, heat loss, and contamination when the incubator is opened.

Microscopy

To analyze your cells, no special preparations are necessary. Cells can be directly observed live or fixed, preferably on an inverted microscope. The bottom cannot be removed. For optimal results in fluorescence microscopy and storage of fixed and stained samples, ibidi provides a mounting medium (50001) optimized for μ-Dishes, μ-Slides, and μ-Plates.

Chemical Compatibility

The table below provides some basic information on the chemical and solvent compatibility of the μ-Dish 35 mm, high. For a full list of compatible solvents and more information on chemical compatibility, please visit the FAQ section on ibidi.com.

| Chemical / Solvent | Compatibility |
|--------------------|-------------------------------------|
| Methanol | yes |
| Ethanol | yes |
| Formaldehyde | yes |
| Acetone | yes, without lid |
| Mineral oil | no |
| Silicone oil | yes |
| Immersion oil | See Immersion Oil on page 3. |

μ -Dish 35 mm Selection Guide

Minimizing Evaporation

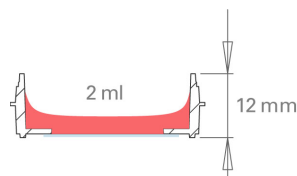
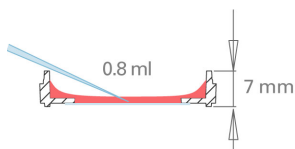
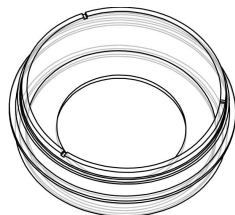
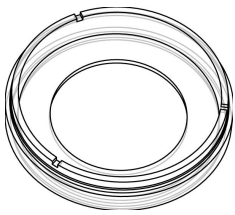
μ -Dish 35 mm, low

Low walls (7 mm) for large access to the cells. Designed for micromanipulation and microinjection.

μ -Dish 35 mm, high

High walls (12 mm) for all standard applications. Also available with glass bottom, relocation grid, and elastic surface (ESS).

Using the μ -Dish with a closed lid, the evaporation in an incubator system with 37°C and 95% humidity is around 1% per day. Using the μ -Dish with a closed lid in a 37°C heating system with low humidity (between 20% and 40%), the evaporation is around 10% per day. For reducing the evaporation down to 1% per day in all systems, we recommend sealing the lid with ibidi Anti-Evaporation Oil (50051).



Immersion Oil

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

| Company | Product | Ordering No. | Lot Number | Test Date |
|-----------|------------------------|---------------|------------|-----------|
| ibidi | ibidi Immersion Oil | 50101 | 16-12-27 | 01/2017 |
| Zeiss | Immersion Oil 518 F | 444960 | 160706 | 01/2017 |
| Zeiss | Immersion Oil 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 |

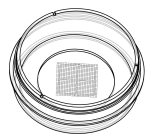
Ordering Information

μ-Dish 35 mm, high



| Cat. No. | Description |
|-----------|--|
| 81156 | μ-Dish 35 mm, high ibiTreat : ø 35 mm, high wall (2 ml volume), #1.5 polymer coverslip, tissue culture treated, sterilized |
| 81156-400 | μ-Dish 35 mm, high ibiTreat, Bulk Pack : ø 35 mm, high wall (2 ml volume), #1.5 polymer coverslip, tissue culture treated, sterilized |
| 81151 | μ-Dish 35 mm, high Uncoated : ø 35 mm, high wall (2 ml volume), #1.5 polymer coverslip, hydrophobic, sterilized |

μ-Dish 35 mm, high Grid-500



| Cat. No. | Description |
|----------|---|
| 81166 | μ-Dish 35 mm, high Grid-500 ibiTreat : ø 35 mm, high wall (2 ml volume), grid repeat distance 500 μm, #1.5 polymer coverslip, tissue culture treated, sterilized |
| 81161 | μ-Dish 35 mm, high Grid-500 Uncoated : ø 35 mm, high wall (2 ml volume), grid repeat distance 500 μm, #1.5 polymer coverslip, hydrophobic, sterilized |

μ-Dish 35 mm, high Glass Bottom



| Cat. No. | Description |
|-----------|--|
| 81158 | μ-Dish 35 mm, high Glass Bottom : ø 35 mm, high wall (2 ml volume), #1.5H (170 ±5 μm) D 263 M Schott glass, sterilized |
| 81158-400 | μ-Dish 35 mm, high Glass Bottom, Bulk Pack : ø 35 mm, high wall (2 ml volume), #1.5H (170 ±5 μm) D 263 M Schott glass, sterilized |

μ-Dish 35 mm, high ESS



| Cat. No. | Description |
|----------|---|
| 81291 | μ-Dish 35 mm, high ESS 1.5 kPa Uncoated : ø 35 mm, high wall (2 ml volume), elastic surface with a stiffness of 1.5 kPa, hydrophobic, sterilized |
| 81391 | μ-Dish 35 mm, high ESS 15 kPa Uncoated : ø 35 mm, high wall (2 ml volume), elastic surface with a stiffness of 15 kPa, hydrophobic, sterilized |
| 81191 | μ-Dish 35 mm, high ESS 28 kPa Uncoated : ø 35 mm, high wall (2 ml volume), elastic surface with a stiffness of 28 kPa, hydrophobic, 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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