

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 18 Well - Flat is a convenient multi-well plate for quick and easy tests to probe experimental parameters like antibody dilution, seeding density or most effective drug concentrations. Unlike in 96 well plates, the whole area of the well can be observed in phase-contrast microscopy mode since there is no disturbing refraction of the liquid surface meniscus.

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.

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

Geometry of the μ-Slide 18 Well - Flat

The μ-Slide 18 Well - Flat provides standard slide format according to ISO 8037/1. The well to well distance of 9 mm (like 96 well plates) allows using multichannel pipettes.

Geometry of the μ-Slide 18 Well - Flat

Outer dimensions in mm (w × l)	25.5×75.5
Number of wells	18
Well diameter	5 mm
Volume per well	30 μl
Height with/without lid	5.0/1.6 mm
Growth area per well	0.2 cm ²
Coating area per well	0.25 cm ²
Bottom	ibidi Polymer Coverslip

Surface

The tissue culture treated ibiTreat surface is a physical surface modification and optimized for adhesion of most cell types. 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 testing your coating procedure on uncoated and ibiTreat surfaces, since some proteins and biomolecules adhere differently to hydrophobic or hydrophilic polymer surfaces.

Coating

Specific coatings are possible following this protocol:

1. Prepare your coating solution according to the manufacturer's specifications or reference.

2. Apply 30 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](#).

Seeding Cells

- Trypsinize and count cells as usual. Dilute the cell suspension to the desired concentration. Depending on your cell type, application of a $0.7-1.7 \times 10^5$ cells/ml suspension should result in a confluent layer within 2–3 days.
- Apply 30 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.

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 30 μl fresh medium per well.

The volume of a single well is very small. Depending on your cell type the medium might be consumed after some hours. If you want to incubate your cells for longer than a couple of hours we recommend to aspirate and refill cell medium every day.

Tip:

If the wells are properly filled with 30 μl, the liquid surface is planar and in good alignment with the μ-Slides surface. This is how you will be able to observe the whole well area with unimpaired phase contrast.

Cell Microscopy and Solvents for Fixation

To analyze your cells, no special preparations are necessary. Cells can be observed live, or fixed directly in the μ-Slide 18 Well - Flat, preferably on an inverted microscope. Due to the thin bottom, high resolution microscopy is possible. The material is compatible to most fixatives, like acidic acid, alcohols and PFA. For a full list of compatible solvents and more information on chemical compatibility, please visit the FAQ section on www.ibidi.com. For optimal results in fluorescence microscopy and storage of stained probes ibidi provides a mounting medium (50001) optimized for μ-Dishes and μ-Slides.

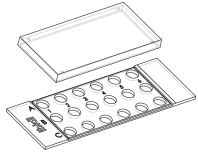
Immersion Oil

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	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

Ordering Information

The μ-Slide 18 Well - Flat family is available with different surfaces. See table below for choosing your μ-Slide 18 Well - Flat.



Cat. No.	Description
81826	μ-Slide 18 Well - Flat ibiTreat: #1.5 polymer coverslip, tissue culture treated, sterilized
81822	μ-Slide 18 Well - Flat Collagen IV: #1.5 polymer coverslip, sterilized
81824	μ-Slide 18 Well - Flat Poly-L-Lysine: #1.5 polymer coverslip, sterilized
81821	μ-Slide 18 Well - Flat Uncoated: #1.5 polymer coverslip, 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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