

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 VI - flat is suited for quick cell tests a few hours after seeding. It is intended for optimization of experimental parameters like antibody dilution, seeding density or most effective drug concentration. Its flat dimensions allow convenient space-saving storage for your documentation in standard slide boxes.

Material

ibidi μ-Slides, μ-Dishes, and μ-Plates are made of a polymer 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 intended for one-time use and are not autoclavable, since they are only temperature-stable up to 80°C/175°F. Please note that gas exchange between the medium and the 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	
ibiTreat, Uncoated	36 months

Geometry

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

Geometry of the μ-Slide VI - Flat

Outer dimensions	25.5 mm x 75.5 mm
Adapters	None
Number of channels	6
Total height	1.5 mm
Channel volume	30 μl
Channel height	0.4 mm
Channel length	17 mm
Channel width	3.8 mm
Growth area	0.6 cm ² per channel
Coating area using 30 μl	1.2 cm ² per channel
Bottom	No. 1.5 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

Detailed information about coatings is provided in [Application Note 08: Coating protocols for ibidi labware products](#).

In short, 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. The μ-Slide VI - Flat is ready to be used. Optionally let dry at room temperature. Attention, some coating proteins might degenerate when drying!

Seeding Cells

- Trypsinize and count cells as usual. Dilute the cell suspension to the desired concentration. Depending on your cell type, application of a $1-3 \times 10^6$ cells/ml suspension should result in a near-confluent cell-lawn after adhesion and spreading.
- Unpack your μ-Slide VI - Flat and lay it inside a 10 cm Petri dish.
- Pipet 30 μl cell suspension into each channel of the μ-Slide. Quick dispensing helps to avoid trapped air bubbles.
- Close the Petri dish to minimize evaporation and place it in your incubator until cells have attached and spread.
- Conduct your experiments.

Tip:

As the μ-Slide VI - Flat does not come with a lid, it is not optimized for long term cell based assays. If you want to incubate your cells for longer than a couple of hours we recommend using the μ-Slide VI ^{0.4} instead.

Important!

After coating the μ-Slide with a coating that must not be dried, seed cells without emptying the channel: First, aspirate all remaining liquid from both reservoirs. Do not empty the channel. Then, fill 90 μl of cell suspension into one of the reservoirs. After that, slowly remove 90 μl from the opposite reservoir. Make sure to avoid trapped air bubbles.

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 following table provides some basic information on the chemical and solvent compatibility of the μ-Slide VI - Flat. 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.

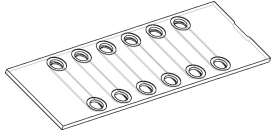
Immersion Oil

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
Cargille	Type A	16482	100592	01/2017
Cargille	Type HF	16245	92192	01/2017
Carl Roth	Immersion oil	X899.1	414220338	01/2017
Leica	Immersion Liquid	11513859	n.a.	03/2011
Nikon	Immersion Oil F2 30cc	MXA22192	n.a.	01/2020
Nikon	Silicone Immersion Oil 30cc	MXA22179	20191101	01/2020
Olympus	Silicone Immersion Oil	SIL300CS-30CC	N4190800	01/2017
Zeiss	Immersionol 518 F	444960	160706	01/2017
Zeiss	Immersionol W 2010	444969	101122	04/2012

Ordering Information

The μ-Slide VI - Flat is available with different surfaces.



Cat. No.	Description
80626	μ-Slide VI - Flat ibiTreat: #1.5 polymer coverslip, tissue culture treated, sterilized
80621	μ-Slide VI - Flat Uncoated: #1.5 polymer coverslip, hydrophobic, sterilized

For research use only!

Further information 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.

© ibidi GmbH, Lochhamer Schlag 11, 82166 Gräfelfing, Germany.