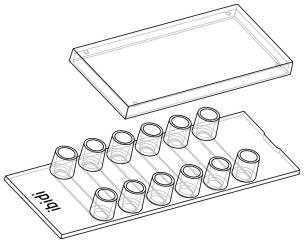


The ibidi product family is comprised of a variety of µ-Slides, µ-Dishes, and µ-Plates which have all been designed for high-end microscopic analysis of fixed or living cells. The high optical quality of the material is similar to that of glass, so you can perform all kinds of fluorescence experiments with uncompromised resolution and choice of wavelength.

The convenient six channel format of the µ-Slide VI 0.4 is ideal for static cell cultivation and the application of standard immunofluorescence protocols, like treatment, staining, and microscopy of living or fixed cells. Alternatively, the µ-Slide VI 0.4 can be connected to a pump and enables you to observe cells under flow conditions.

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

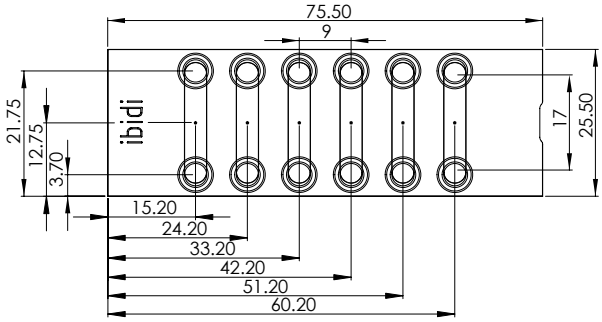
The µ-Slides, µ-Dishes and µ-Plates are sterilized and welded in a gas-permeable packaging. The shelf life under proper storage conditions (in a dry place, no direct sunlight) is listed in the following table.

Conditions	
Shipping conditions	Ambient
Storage conditions	RT (15–25°C)

Shelf Life	
ibiTreat, Uncoated	36 months
Collagen I, Collagen IV	18 months
Poly-L-Lysine	18 months

Geometry of the µ-Slide VI 0.4

The µ-Slide VI 0.4 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	
Outer dimensions in mm (w × l)	25.5 × 75.5
Adapters	Female Luer
Number of channels	6
Channel volume	30 µl
Channel height	0.4 mm
Channel length	17 mm
Channel width	3.8 mm
Volume per adapter	60 µl
Height with/without lid	8.7/7.5 mm
Growth area	0.6 cm^2 per channel
Coating area using 30 µl	1.2 cm^2 per channel
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.

The µ-Slide VI $^{0.4}$ is also available with a Collagen Type I, Collagen Type IV or a Poly-L-Lysine coated surface. For the coating, only high quality proteins are used: Collagen Type I: ibidi #50203, Collagen Type IV: Corning #356233, Poly-L-Lysine: Sigma #P4832.

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 $^{0.4}$ is ready to be used. Optionally let dry at room temperature. Attention, some coating proteins might degenerate when drying!

Tip:

For washing you can add the buffer into one channel end and simultaneously aspirate it on the other side.

Seeding Cells

- Trypsinize and count cells as usual. Dilute the cell suspension to the desired concentration. Depending on your cell type, application of a 3-7 × 10^5 cells/ml suspension should result in a confluent layer within 2-3 days.
- Apply 30 µl cell suspension into the channel of the µ-Slide. Quick dispensing helps to avoid trapped air bubbles.
- Cover reservoirs with the supplied lid. Incubate at 37°C and 5 % CO_2 as usual.
- Await cell attachment in order not to flush out the cells. Afterwards fill each reservoir with 60 µl cell-free medium.

Tip:

The day before seeding the cells we recommend placing the cell medium and the µ-Slide into the incubator for equilibration. This will prevent the liquid inside the channel from emerging air bubbles over the incubation time.
Trapped air bubbles can be removed from the channel by inclining the µ-Slide and knocking at one edge.

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 120 µl of cell suspension into one of the reservoirs. After that, slowly remove 120 µl from the opposite reservoir. Make sure to avoid trapped air bubbles.

Exchanging Medium

Aspirate both reservoirs and slowly fill 120 µl of fresh medium into one of the reservoirs, which will replace the channel volume by gravity flow.

Attention:

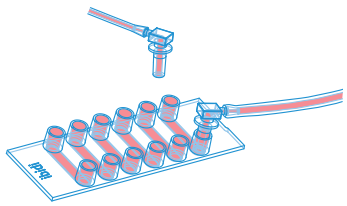
Carefully remove and re-fill liquid with a standard pipette. Be careful when using a cell culture aspiration device as this may flush away partially attached cells or clusters.

Connecting Tubing for Perfusion

The µ-Slide is fully compatible with the ibidi Pump System and other pump setups.

Detailed information about flow rates, shear stress, and shear rates is provided in Application Note 11 "Shear stress and shear rates". Suitable Tube Adapter Sets are also available (see page 4). They consist of a tubing (20 cm) with inner diameter of 1.6 mm and adapters for the connection between the ibidi µ-Slide (female Luer) and the tubing of the pump in use.

1. Fill the Luer ports with cell-free medium until they are completely filled. This ensures air bubble-free connection of the tubing.
2. Prepare the perfusion system by 1) filling the tubing completely and 2) pinching off the tubing with a screw clamp or a hose clip.
3. Connect the male Luer ends of the clamped tubing to the Luer ports one at a time. Make sure not to trap air. Remove access culture medium with tissue.



4. Open the clamped tubing and conduct your perfusion experiment.

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 mounting media (50001 and 50011) 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 0.4. 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

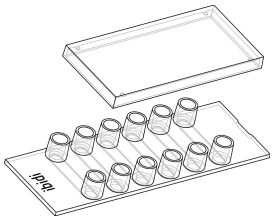
When using oil immersion objectives with the ibidi Polymer Coverslip, use only the immersion oils specified in the table below. The use of any non-recommended oil could damage the ibidi Polymer Coverslip. The resulting leakage may harm objectives and microscope components. All immersion oils that are 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	Immersol 518 F	444960	160706	01/2017
Zeiss	Immersol W 2010	444969	101122	04/2012

Ordering Information

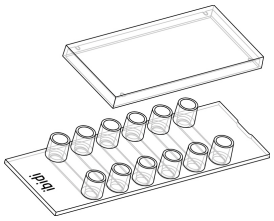
The µ-Slide VI family is available in different surfaces and bottom characteristics.

µ-Slide VI 0.4



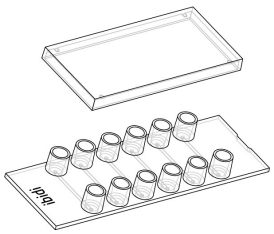
Cat. No.	Description
80606	**µ-Slide VI 0.4 ibiTreat**: #1.5 polymer coverslip, tissue culture treated, sterilized
80606-90	**µ-Slide VI 0.4 ibiTreat, Bulk Pack**: #1.5 polymer coverslip, tissue culture treated, sterilized
80609	**µ-Slide VI 0.4 Collagen I**: #1.5 polymer coverslip, sterilized
80602	**µ-Slide VI 0.4 Collagen IV**: #1.5 polymer coverslip, sterilized
80604	**µ-Slide VI 0.4 Poly-L-Lysine**: #1.5 polymer coverslip, sterilized
80600	**µ-Slide VI 0.4 Bioinert**: #1.5 polymer coverslip, surface passivation with Bioinert, sterilized
80601	**µ-Slide VI 0.4 Uncoated**: #1.5 polymer coverslip, hydrophobic, sterilized

µ-Slide VI 0.5 Glass Bottom



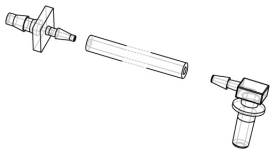
Cat. No.	Description
80607	**µ-Slide VI 0.5 Glass Bottom**: 1.5H (170 µm ±5 µm) D 263 M Schott glass, sterilized

µ-Slide VI 0.1



Cat. No.	Description
80666	**µ-Slide VI 0.1 ibiTreat**: #1.5 polymer coverslip, tissue culture treated, sterilized
80661	**µ-Slide VI 0.1 Uncoated**: #1.5 polymer coverslip, hydrophobic, sterilized

Tube Adapter Set



Cat. No.	Description	Pcs./Box
10831	**Tube Adapter Set**: sterilized	6x2

For research use only!

Further information can be found at ibidi.com. For questions and suggestions please contact us by e-mail *info@ibidi.de* or by telephone +49 (0)89/520 4617 0.