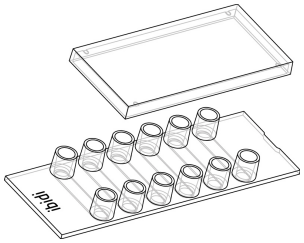


The ibidi product family is comprised of a variety of µ–Slides and µ–Dishes, which have all been designed for high–end microscopic analysis of fixed or living cells. The high optical quality of the material is similar to that of glass, so you can perform all kinds of fluorescence experiments with uncompromised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

The 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 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.

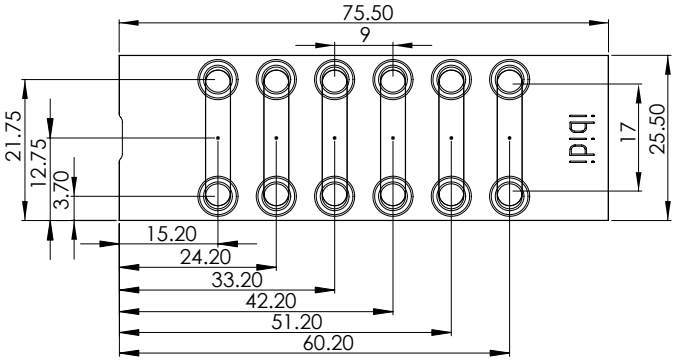
Conditions	
Shipping conditions	Ambient
Storage conditions	RT (15-25°C)

Shelf Life	
ibiTreat, Uncoated	36 months
Collagen IV, 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.

Dimensions	
Outer dimensions	25.5 mm x 75.5 mm
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 reservoir	60 µl
Growth area	0.6 cm^2 per channel
Coating area using 30 µl	1.2 cm^2 per channel
Bottom matches coverslip	No. 1.5



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 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

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.

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.

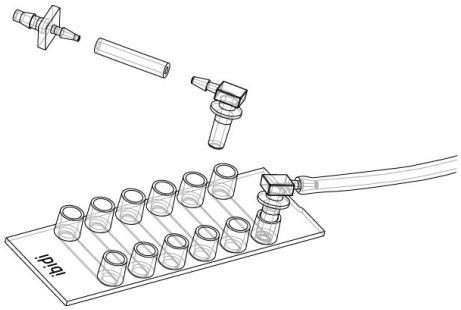
Exchanging Medium

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

Flow Application

Detailed information about flow rates, shear stress, and shear rates is provided in Application Note 11 "Shear stress and shear rates" on www.ibidi.com

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.



Please contact us for recommended perfusion setups. ibidi provides a variety of channel slides and pump systems.

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 preferably on an inverted microscope. Due to the thin bottom of only 180 µm, high resolution microscopy

is possible. 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 information on solvent and chemical compatibility can be found in the FAQ section on www.ibidi.com.

Immersion Oil

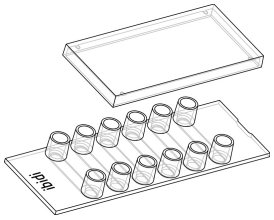
When using oil immersion objectives with the ibidi Polymer Coverslip, use only the immersion oils specified in the table below. The use of any non–recommended oil could damage the ibidi Polymer Coverslip. The resulting leakage may harm objectives and microscope components. All immersion oils that are 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

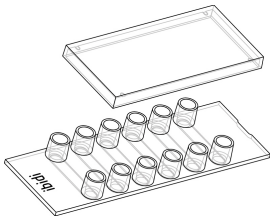
The µ–Slide VI family is available in different surfaces and bottom characteristics. See table below for choosing your µ–Slide VI.

µ–Slide VI 0.4



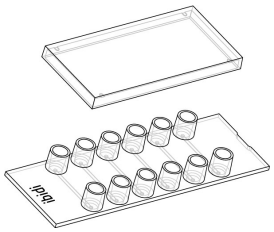
Cat. No.	Description
80606	**µ–Slide VI 0.4 ibiTreat**: #1.5 polymer coverslip, tissue culture treated, sterilized
80606-90	**µ–Slide VI 0.4 ibiTreat**: #1.5 polymer coverslip, tissue culture treated, sterilized
81602	**µ–Slide VI 0.4 Collagen IV**: #1.5 polymer coverslip, sterilized
81604	**µ–Slide VI 0.4 Poly-L-Lysine**: #1.5 polymer coverslip, sterilized
81601	**µ–Slide VI 0.4 Uncoated**: #1.5 polymer coverslip, hydrophobic, sterilized

µ–Slide VI 0.5 Glass Bottom



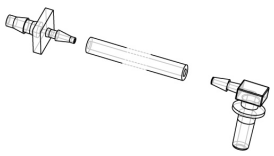
Cat. No.	Description
80607	**µ–Slide VI 0.5 Glass Bottom**: 1.5H (170 µm ±5 µm) D 263 M Schott glass, sterilized

µ–Slide VI 0.1



Cat. No.	Description
80666	**µ–Slide VI 0.1 ibiTreat**: #1.5 polymer coverslip, tissue culture treated, sterilized
80662	**µ–Slide VI 0.1 Collagen IV**: #1.5 polymer coverslip, sterilized
80661	**µ–Slide VI 0.1 Uncoated**: #1.5 polymer coverslip, hydrophobic, sterilized

Tube Adapter Set



Cat. No.	Description
10831	**Tube Adapter Set**: sterilized

Selected References

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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.