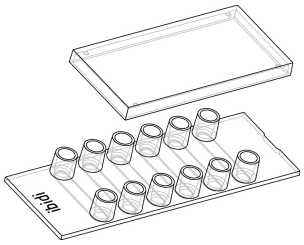


The ibidi product family is comprised of a variety of µ-Slides and µ-Dishes, which have all been designed for high-end microscopic analysis of fixed or living cells.

The glass bottom versions of the µ-Slides and µ-Dishes are especially designed for TIRF, super resolution and single molecule applications. The µ-Slide VI 0.5 Glass Bottom allows you to perform high resolution microscopy in a volume-saving channel format.

The convenient six channel format of the µ-Slide VI 0.5 Glass Bottom 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 0.5 Glass Bottom can be connected to a pump and enables you to observe cells under flow conditions.

Material

The µ-Slide VI 0.5 Glass Bottom is made with a glass coverslip bottom. It is not possible to detach the bottom. The µ-Slide VI 0.5 Glass Bottom is not autoclavable since it is temperature stable only up to 80°C/175°F.

Optical Properties ibidi Glass Bottom	
Refractive index n_D	1.523
Abbe number	55
Thickness	No. 1.5H (selected quality 170 µm, ± 5 µm)
Material	Schott borosilicate glass, D 263M

Attention!

Be cautious when handling ibidi labware products with glass bottom! The glass coverslip or glass slide is very fragile and might break easily. Handle with care to avoid physical injury and damage to devices through leakage of the medium.

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.

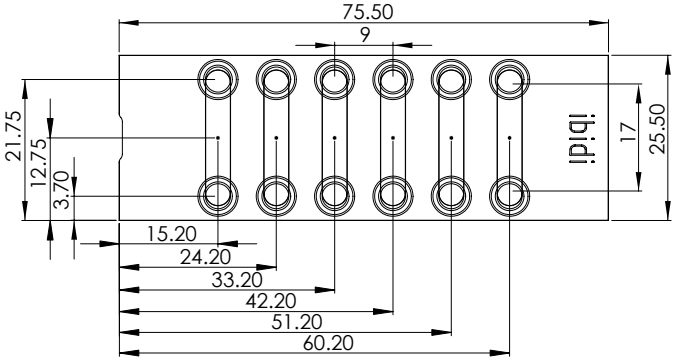
Conditions	
Shipping conditions	Ambient
Storage conditions	RT (15–25°C)

Shelf Life	
Glass Bottom	36 months

Geometry of the µ-Slide VI 0.5 Glass Bottom

The µ-Slide VI 0.5 Glass Bottom 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	40 µl
Channel height	0.54 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 40 µl	1.2 cm^2 per channel
Bottom matches coverslip	No. 1.5H



Surface

The µ-Slide VI 0.5 Glass Bottom is manufactured with an uncoated glass coverslip. Washing steps (e.g. with PBS) before cell seeding can remove glass dust which is advantageous for direct cell growth on the surface.

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 40 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 0.5 Glass Bottom 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 2-5 × 10^5 cells/ml suspension should result in a confluent layer within 2-3 days.
- Apply 40 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.

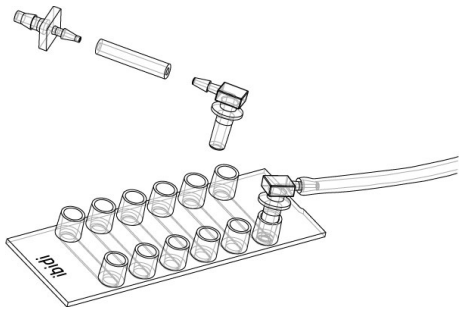
Exchanging Medium

Aspirate both reservoirs and 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.

Shear Stress in µ-Slide VI 0.5 Glass Bottom

The shear stress (τ) in µ-Slide VI $^{0.5}$ Glass Bottom can be calculated by inserting the flowrate (Φ) and the dynamical viscosity (η) in the following formula:

$$\tau = \eta \cdot 104.7 \cdot \Phi$$

$$Shearstress \quad \tau \left[\frac{dyn}{cm^2}\right]$$

$$Dynamicalviscosity \quad \eta \left[\frac{dyn \cdot s}{cm^2}\right]$$

$$Flowrate \quad \Phi \left[\frac{ml}{min}\right]$$

Please insert the values in the given unit definitions. For simplicity the calculations include conversions of units (not shown).

Immersion Oil

When using ibidi Glass Bottom products with oil immersion objectives, there is no known incompatibility with any immersion oil on the market. All types of immersion oils can be used.

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

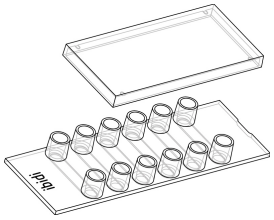
The table below provides some basic information on the chemical and solvent compatibility of the µ-Slide VI $^{0.5}$ Glass Bottom. For a full list of compatible solvents and more information on chemical compatibility, please visit the FAQ section on ibidi.com.

Chemical / Solvent	Compatibility
Methanol	yes
Ethanol	yes
Formaldehyde	yes
Acetone	no
Mineral oil	yes
Silicone oil	yes
Immersion oil	See **Immersion Oil** on page 3.

Ordering Information

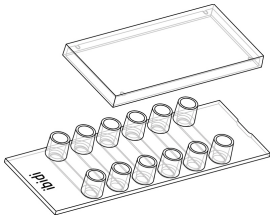
The µ-Slide VI family is available in different surfaces and bottom characteristics. See table below for choosing your µ-Slide VI.

µ-Slide VI 0.4



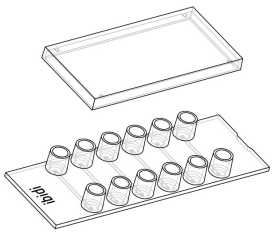
Cat. No.	Description
80606	**µ-Slide VI 0.4 ibiTreat**: #1.5 polymer coverslip, tissue culture treated, sterilized
80606-90	**µ-Slide VI 0.4 ibiTreat, Bulk Pack**: #1.5 polymer coverslip, tissue culture treated, sterilized
81602	**µ-Slide VI 0.4 Collagen IV**: #1.5 polymer coverslip, sterilized
81604	**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



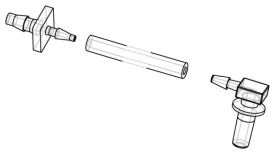
Cat. No.	Description
80607	**µ-Slide VI 0.5 Glass Bottom**: 1.5H (170 µm ±5 µm) D 263 M Schott glass, sterilized

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

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.

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