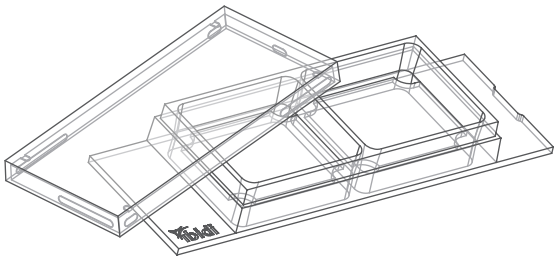
µ-Slide 2 Well $^{Ph+}$ Glass Bottom

Instruction Manual



The ibidi labware 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 glass bottom versions are especially designed for TIRF, super-resolution, and single molecule applications.
The µ-Slide 2 Well $^{Ph+}$ Glass Bottom (phase contrast plus) is a chambered coverslip with 2 wells. In contrast to the standard µ-Slide 2 Well Glass Bottom, it provides a special intermediate plate for meniscus-free phase contrast and high-end fluorescence microscopy.

This document applies to the following product:

80297	**µ-Slide 2 Well $^{Ph+}$ Glass Bottom**

Material

The µ-Slide 2 Well $^{Ph+}$ Glass Bottom is made with a glass coverslip bottom. It is not possible to detach the bottom from the upper part. The slide is intended for one-time use and is not autoclavable, since it is only temperature-stable up to 80 °C/175 °F.

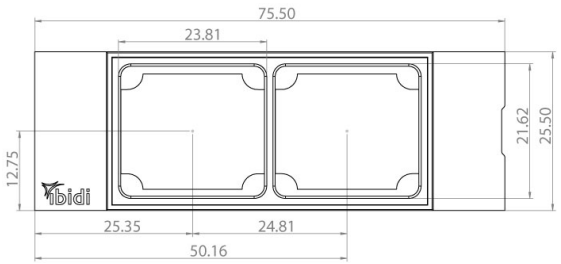
Optical Properties of Glass Coverslip	
Refractive index	1.523
Abbe number	55
Thickness	No. 1.5H (170 µm ± 5 µm)
Material	Schott borosilicate glass, D 263 M

CAUTION – Be cautious when handling ibidi labware products with a glass bottom! The glass coverslip or slide is fragile and can break easily. Handle these items carefully to prevent physical injury and damage to devices due to medium leakage.

Geometry

The µ-Slide 2 Well $^{Ph+}$ Glass Bottom provides a standard slide format according to ISO 8037/1.

Specifications	
Outer dimensions (w × l)	25.5 × 75.5 mm^2
Number of wells	2
Dimensions of wells (w × l × h)	21.6 × 23.8 × 9.3 mm^3
Volume per well	1.5 ml
Liquid height	3.0 mm
Height with/without lid	10.8/9.5 mm
Growth area per well	5.1 cm^2
Coating area per well	11.4 cm^2
Bottom	Glass Bottom



Shipping and Storage

This product is sterilized and sealed in a gas-permeable packaging. The shelf life under proper storage conditions (in a dry place, no direct sunlight) is outlined in the following table.

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

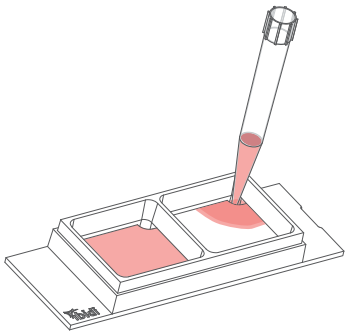
Shelf Life	
Glass Bottom	36 months

Surface

The µ-Slide 2 Well Ph+ Glass Bottom is manufactured with a glass coverslip. Washing it (e.g., with PBS) before cell seeding helps removing glass dusts, which enhances direct cell growth on the surface.

Filling and Handling

The µ-Slide 2 Well Ph+ Glass Bottom suppresses the meniscus that interferes with the phase contrast effect in standard open wells. Openings near the corners allow for easy access to the wells for filling and aspirating liquids. To fill the wells, use a standard pipet and inject the cell suspension directly into one of the openings. Medium exchange can be easily performed by aspirating the entire volume and refilling with 1.5 ml per well.



TIP – The day before seeding the cells, we recommend placing both the cell medium and the µ-Slide in the incubator for equilibration. This helps prevent air bubble formation in the wells during incubation.

Coating

Detailed information about coatings is provided in Application Note 08: Coating Protocols for ibidi Labware.

In short, specific coatings are possible following this protocol:

1. Prepare your coating solution according to the manufacturer's specifications. Adjust the concentration to a coating area of 11.4 cm^2 and a volume of 1.5 ml per well.
2. Apply 1.5 ml per well and leave it at room temperature for at least 30 minutes.
3. Aspirate the solution and wash with the recommended protein dilution buffer.
4. The coated slide is ready to be used. Be aware that allowing the coated surface to dry out is not recommended, as some coating proteins may degrade upon drying.

Seeding Cells

1. Trypsinize and count the cells as usual. Dilute the cell suspension to the desired concentration. Depending on your cell type, application of a 5–11 × 10^4 cells/ml suspension should result in a confluent layer within 2–3 days.
2. Apply 1.5 ml cell suspension per well. Avoid shaking, as this will result in inhomogeneous cell distribution.
3. Cover the slide with the supplied lid. Incubate as usual (e.g., at 37 °C and 5% CO_2).

Insensitive cells can be left in their seeding medium for several days and grow to confluence there. However, optimal results might be achieved when the medium is changed every 2–3 days. For this, carefully aspirate the old medium and replace it by 1.5 ml fresh medium per well.

Microscopy

To image your cells, no special preparations are necessary. Living or fixed cells can be directly observed, preferably on an inverted microscope. The bottom cannot be removed. For optimal results in fluorescence microscopy and for storage of fixed and stained samples, ibidi provides mounting media that are optimized for ibidi labware:
Cat. No. 50001: ibidi Mounting Medium
Cat. No. 50011: ibidi Mounting Medium with DAPI

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.

Chemical Compatibility

The following table provides basic information on the chemical and solvent compatibility of the µ-Slide 2 Well Ph+ Glass Bottom. For a full list of compatible solvents and more information on chemical compatibility, visit ibidi.com/chemicals.

Chemical / Solvent	Compatibility
Methanol	Yes
Ethanol	Yes
Formaldehyde	Yes
Acetone	No
Mineral oil	Yes
Silicone oil	Yes
Immersion oil	See Section “Immersion Oil”

For research use only!

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