

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-Plate 96 Well Square Glass Bottom allows you to perform high-resolution microscopy in a standard multiwell format. This imaging plate is made of black polymer material, resulting in less well-to-well crosstalk in fluorescence microscopy.

This document applies to the following product:

89627 μ-Plate 96 Well Square Glass Bottom

Material

The μ-Plate 96 Well Square Glass Bottom is made with a glass coverslip bottom. It is not possible to detach the bottom from the upper part. The plate 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.

Shipping and Storage

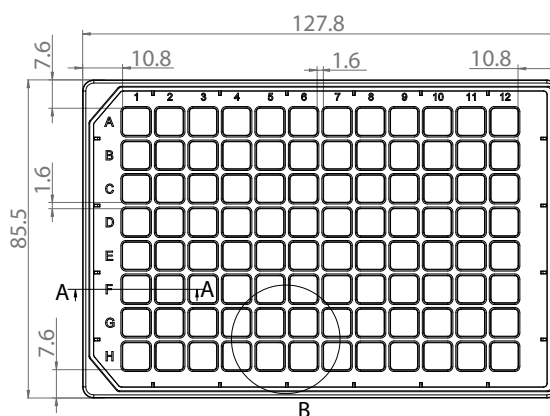
This product is sterilized and sealed in a gas-permeable packaging. The shelf life under proper storage conditions (in a dry place, no direct sunlight) is outlined in the following table.

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

Shelf Life	
Glass Bottom	36 months

Geometry

The μ-Plate 96 Well Square Glass Bottom provides standard geometry and numbering (A–H, 1–12).

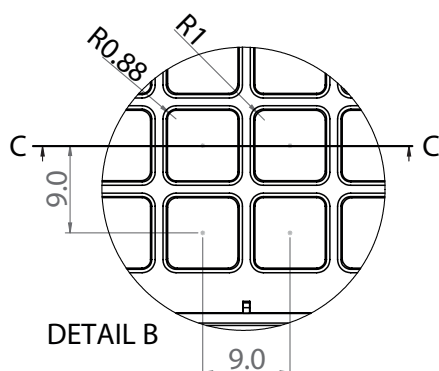
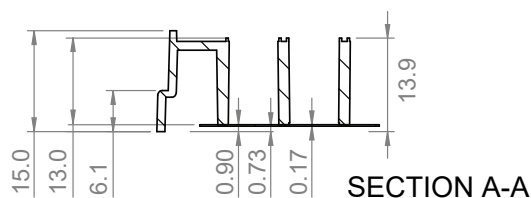


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Instruction Manual

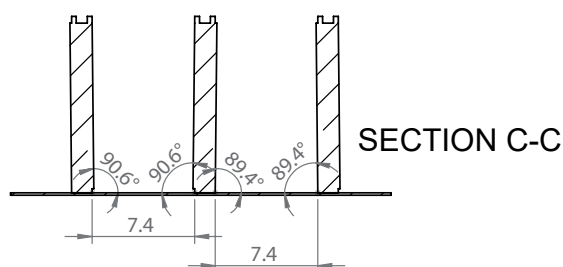
The μ-Plate 96 Well Square Glass Bottom meets all important values of the ANSI/SLAS (SBS) Standards (1-2004, 2-2004, 3-2004 and 4-2004).

Specifications (mm)	
Length	127.8 ± 0.2
Width	85.5 ± 0.2
Height with lid	17.2 ± 0.4
Height without lid	15.0 ± 0.4
Well to well distance	9.0 ± 0.1
Well clearance	0.73 ± 0.1
Focal offset	0.9 ± 0.1



Single Well Dimensions	
Single well dimensions	7.4 × 7.4 mm ²
Single well depth	13.0 mm
Volume	300 μl
Growth area	0.56 cm ²
Coating area using 300 μl	2.35 cm ²

Due to the manufacturing process, the angles of the well walls vary slightly. The details are illustrated in the graphic below.



Surface

The μ-Plate 96 Well Square 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.

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 2.35 cm² and a volume of 300 μl per well.
2. Apply 300 μl 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 plate 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 2–5 × 10⁴ cells/ml suspension should result in a confluent layer within 2–3 days.
2. Apply 300 μl cell suspension per well. Avoid shaking, as this will result in inhomogeneous cell distribution.
3. Cover the plate with the supplied lid. Incubate as usual (e.g., at 37 °C and 5% CO₂).

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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 300 μl fresh medium per well.



TIP – You can stack the μ-Plates to save space in your incubator. This will not affect cell growth. Due to stability reasons, we recommend making batches with not more than 6 plates.

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 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](#)

Chemical Compatibility

The following table provides basic information on the chemical and solvent compatibility of the μ-Plate 96 Well Square Glass Bottom. For a full list of compatible solvents and more information on chemical compatibility, visit [ibidi.com/chemicals](https://www.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](https://www.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.

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