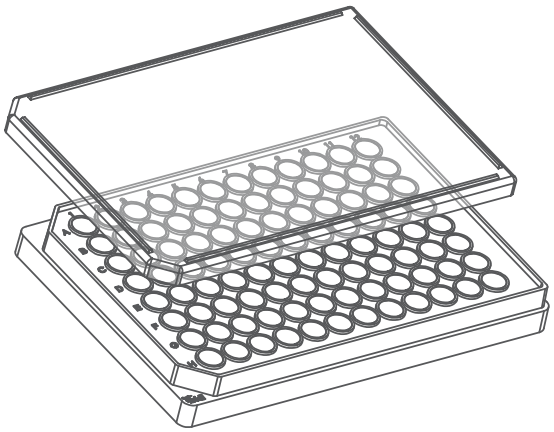
µ-Plate 96 Well Round Glass Bottom

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-Plate 96 Well Round 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 is applicable to the following product:

89607	**µ-Plate 96 Well Round Glass Bottom**

Material

The µ-Plate 96 Well Round Glass Bottom is made with a glass coverslip bottom. It is not possible to detach the bottom. The µ-Plate 96 Well Round Glass Bottom is intended for single use and not autoclavable, as it is temperature-stable up to 80 °C/175 °F only.

Optical Properties of the Glass Coverslip 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

CAUTION – 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

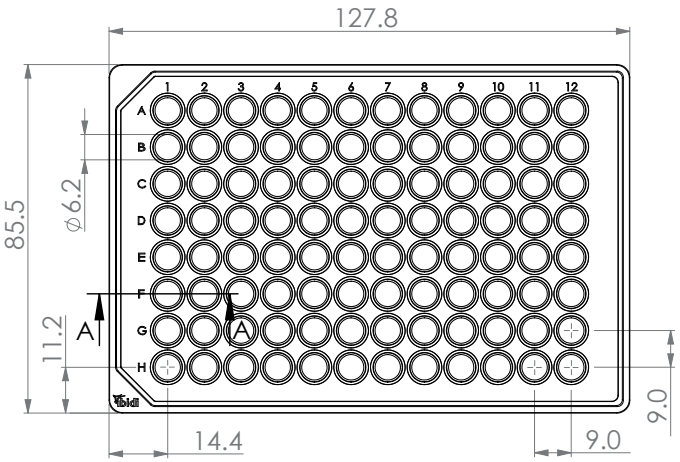
The µ-Slides, µ-Dishes and µ-Plates are sterilized and welded in a gas-permeable packaging. The shelf life under proper storage conditions (in a dry place, no direct sunlight) are listed in the following table.

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

Shelf Life	
Glass Bottom	36 months

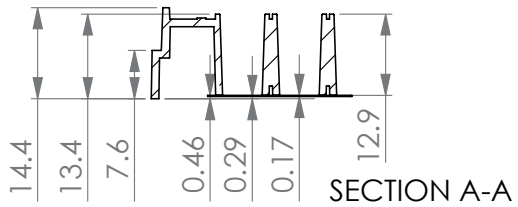
Geometry

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



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

Dimensions (mm)		
Length	127.8	± 0.4
Width	85.5	± 0.4
Height with lid	16.6	± 0.2
Height without lid	14.4	± 0.2
Well-to-well distance	9.0	± 0.1
Well clearance	0.29	± 0.1
Focal offset	0.46	± 0.1
Bottom	Glass Bottom	



Single Well Dimensions	
Diameter	6.2 mm ± 0.15 mm
Well depth	12.9 ± 0.2 mm
Volume	200 µl
Growth area	0.30 cm^2
Coating area using 200 µl	1.61 cm^2

Surface

The µ-Plate 96 Well Round 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.

In short, specific coatings are possible using this protocol:

1. Prepare your coating solution according to the manufacturer's specifications or reference. Adjust the concentration to a coating area of 1.61 cm^2 and a volume of 200 µl per well.
2. Apply 200 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 coating is ready to be used. Attention, some coating proteins might degenerate when drying, so letting it dry out is not recommended.

Seeding Cells

- Trypsinize and count the cells as usual and dilute the cell suspension to the desired concentration. Depending on your cell type, application of a 2–5 × 10^4 cells/ml suspension should result in a confluent layer within 2–3 days.
- Apply 200 µl cell suspension per well. Avoid shaking, as this will result in inhomogeneous cell distribution.
- Cover the µ-Plate 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 200 µl fresh medium per well.

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

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 µ-Dishes, µ-Slides, and µ-Plates:
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 Round 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 **Immersion Oil** on page 3.

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.

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.