

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 μ-Plate 24 well allows you to perform high resolution microscopy in a standard multi-well format. For less well-to-well crosstalk in fluorescence microscopy this imaging plate is made out of a black plastic material.

Material

ibidi μ-Slides, μ-Dishes, and μ-Plates are made of a plastic that has the highest optical quality. The bottom material 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 plastic bottom, which should not be covered.

Optical Properties ibidi Standard Bottom

Refractive index n_D (589 nm)	1.52
Abbe number	56
Thickness	No. 1.5 (180 μm)
Material	microscopy plastic

Geometry of the μ-Plate 24 well

The μ-Plate 24 well provides standard geometry and numbering (A-D, 1-6). The bottom of the μ-Plate 24 well provides a high accuracy.

Dimensions of the μ-Plate 24 well in mm

Length	127.7	± 0.2
Width	85.5	± 0.2
Height with lid	22.5	± 0.4
Height without lid	20.5	± 0.4
Single well depth	18.5	± 0.2
Well to well distance	18.7	± 0.1
Well clearance	1.5	± 0.1
Single well diameter	15.5	± 0.1

Single well Parameters of the μ-Plate 24 well

Volume	1 ml
Growth area	1.9 cm ²
Coating area using 1 ml	4.3 cm ²

Accuracy of the μ-Plate 24 well Bottom

Inner well flatness	± 10 μm
Whole plate flatness	± 25 μm
Bottom matches coverslip	No. 1.5

The μ-Plate 24 well meets all important values of the ANSI/SBS Standards (1-2004, 2-2004, 3-2004 and 4-2004).

μ-Plate 24 well surface

The μ-Plate 24 well is available with ibiTreat and uncoated surface. The ibiTreat surface is a physical treatment and optimized for adhesion of most cell types. Many cell lines as well as primary cells were tested.

A specific coating of the μ-Plate 24 well can be done yourself following the procedure in section Coating your μ-Plate 24 well.

Coating your μ-Plate 24 well

The uncoated μ-Plate 24 well must be coated to promote cell adhesion. If you like to establish a certain coating for your demands we recommend testing your coating procedure on uncoated and ibiTreat μ-Plate 24 well, since we have observed that some biomolecules adhere differently to hydrophobic or hydrophilic plastic surfaces.

- Prepare your coating solution according to the manufacturer's specifications or reference.
- Apply 1 ml in each well. The coating area using 1 ml is 4.3 cm².
- Follow your coating protocol.

Further information about coatings are provided in [Application Note 08 "Cell culture coating"](#).

Remove the Protection Film before Usage

The bottom of the μ-Plate is covered with a film to protect the optical quality of the plastic surface. Please pull off the protection film before usage!

Seeding Cells

- Trypsinize and count cells as usual. Dilute the cell suspension to the desired concentration. Depending on your cell type, application of a $2.5\text{--}6.5 \times 10^4$ cells/ml suspension should result in a confluent layer within 2–3 days.
- Apply 1 ml cell suspension into each single well. Avoid shaking as this will result in inhomogeneous distribution of the cells.
- Cover the μ-Plate 24 well with the supplied lid. Incubate at 37°C and 5% CO₂ as usual.

Tip:

We recommend not to fill more than 3 ml into the μ-Plate 24 well in order to avoid liquid contacting the lid.

Undemanding cells can be left in their seeding medium for several days and grow to confluence there. However, best results might be achieved when the medium is changed every 2–3 days. Carefully aspirate the old medium and replace it by 1 ml/well fresh medium.

Tip:

You can stack the μ-Plates 24 well to save space in you incubator. This will not affect cell growth. We recommend making batches with up to 6 plates, due to stability reasons.

Preparation for Cell Microscopy

For analyzing your cells no special preparations are necessary. Cells can be observed live or fixed directly in the μ-Plate preferably on an inverted microscope. You can use any fixative of your choice. The μ-Plate material is compatible with a variety of chemicals, e.g. Acetone or Methanol. Further specifications can be found at www.ibidi.com. Due to the thin bottom of only 180 μm, high resolution microscopy is possible.

Immersion Oil

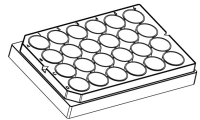
When using oil immersion objectives, use only the immersion oils specified in the table. The use of a non-recommended oil could lead to the damage of the plastic material and the objective.

Company	Product	Ordering Number
Zeiss	Immersol 518 F	(Zeiss) 444960
Zeiss	Immersol W 2010	(Zeiss) 444969
Leica	Immersion liquid	(Leica) 11513859

μ-Plate Family

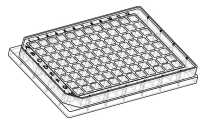
The ibidi μ-Plates are available with the following surfaces. Anyhow, please do not hesitate to contact us for other specifications.

μ-Plate 24 well



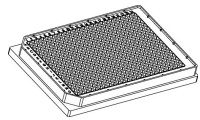
Ordering Number	Treatment or Coating	Characteristics
82406	ibiTreat, tissue culture treated, sterile	hydrophilic, tissue culture treated, round wells
82401	uncoated, sterile	hydrophobic, round wells

μ-Plate 96 well



Ordering Number	Treatment or Coating	Characteristics
89626	ibiTreat, tissue culture treated, sterile	hydrophilic, tissue culture treated, quadratic wells
89621	uncoated, sterile	hydrophobic, quadratic wells

μ-Plate 384 well



Ordering Number	Treatment or Coating	Characteristics
88401	uncoated, sterile	hydrophobic, quadratic wells

For research use only!

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 46 17 0. All products are developed and produced in Germany.
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