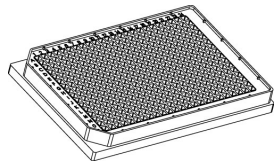


Instructions

μ-Plate 384 well



The ibidi product family comprises a variety of different shapes of μ-Slides and μ-Dishes which all have 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 384 well allows you to perform high resolution microscopy in a standard multi-well format.

Material

The ibidi μ-Plate consists of a plastic with highest optical quality. The bottom material exhibits extremely low birefringence and autofluorescence, both similar to that of glass. It is not possible to detach the bottom from the μ-Plate. The μ-Plate is not autoclavable since it is temperature stable up to 80°C/175°F only. Please note that gas exchange between the liquid and the incubator's atmosphere occurs partially through the plastic bottom which should not be covered.

Geometry of the μ-Plate 384 well

The μ-Plate 384 well provides standard geometry and numbering (A-P, 1-24). The bottom of the μ-Plate 384 well provides a high accuracy.

Dimensions of the μ-Plate 384 well in mm

Length	127.7	± 0.2
Width	85.5	± 0.2
Height with lid	17.2	± 0.4
Height without lid	15.0	± 0.4
Single well depth	12.7	± 0.2
Well to well distance	4.55	± 0.1
Single well dimensions	3.4 x 3.4	± 0.1

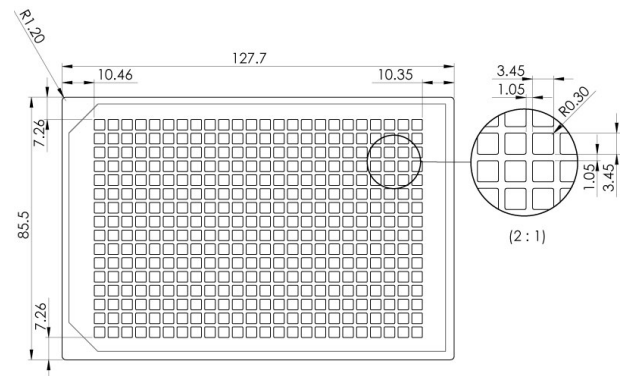
Single well parameters of the μ-Plate 384 well

Volume	50 μl
Growth area	0.11 cm ²
Coating area using 50 μl	0.80 cm ²

Accuracy of the μ-Plate 384 well bottom

Inner well flatness	± 5 μm
Whole plate flatness	± 25 μm
Bottom matches coverslip	No. 1.5

The μ-Plate 384 well meets all important values of the ANSI/SBS Standards (1-2004, 2-2004, 3-2004 and 4-2004).



μ-Plate 384 well surface

The μ-Plate 384 well is available with uncoated surface. For cell adherence a specific coating of the μ-Plate 384 has to be done by yourself following the procedure in section Coating your μ-Plate 384 well.

Coating your μ-Plate 384 well

The uncoated μ-Plate 384 well must be coated to promote cell adhesion.

- Prepare your coating solution according to the manufacturer's specifications or reference.
- Apply 50 μl in each well. The coating area using 50 μl is 0.8 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 $1.5\text{--}4 \times 10^4$ cells/ml suspension should result in a confluent layer within 2–3 days.
- Apply 50 μl cell suspension into each single well. Avoid shaking as this will result in inhomogeneous distribution of the cells.
- Cover the μ-Plate 384 well with the supplied lid. Incubate at 37°C and 5 % CO₂ as usual.

We recommend not to fill more than 100 μl into the μ-Plate 384 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 50 μl/well fresh medium.

Tip:

You can stack the μ-Plates 384 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

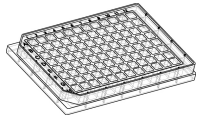
When using oil immersion objectives, only the immersion oils specified in the table may be used. The use of different oil can lead to damages of the plastic material and the objective.

Company	Product	Ordering number
Cargille	type DF, Formula Code: 1261	(Cargille) 16242
Zeiss	518 F	(Zeiss) 444960
Olympus	50CC	(Olympus) 35506
Nikon	50 CCM DF	(Nikon) MXA 20351
Leica	immersion oil, low fluorescence	(Leica) 11513859

μ-Plate family

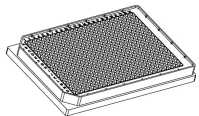
The μ-Plate 96 well and μ-Plate 384 well are available with the following surfaces. Anyhow, please do not hesitate to contact us for other specifications.

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

Selected cell tests on different surfaces

Many eukaryotic and bacterial cells have been tested by ibidi on the different surfaces of the μ-Slides. A variety of other cell lines like COS, CHO, HepG2, and NIH 3T3 were successfully grown by our customers.

	ibiTreat	Collagen IV	Fibronectin	Poly-L-Lysin	Poly-D-Lysin	uncoated
HUVEC	excellent	good	excellent	no cell growth	not done	no cell growth
Rat1	excellent	excellent	excellent	excellent	excellent	poor
HT1080	excellent	excellent	excellent	excellent	not done	poor
HeLa	excellent	excellent	excellent	excellent	not done	poor
Neuro2A	excellent	excellent	excellent	excellent	excellent	poor
PC12	good	excellent	excellent	excellent	excellent	no cell growth
<i>Dictyostelium discoideum</i>	not done	excellent	not done	not done	not done	excellent
<i>Escherichia coli</i>	excellent	not done	not done	excellent	not done	excellent

HUVEC = Human Umbilical Vein Endothelial Cells

Rat1 = Rat Fibroblast

HT1080 = Human Fibrosarcoma

HeLa = Human Cervix Adenocarcinoma

Neuro2A = Mouse Neuroblastoma

PC12 = Rat Pheochromocytom

Dictyostelium discoideum = strain wild type AX-2

Escherichia coli = strain MDG131

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 4617 0. All products are developed and produced in Germany.

© ibidi GmbH, Am Klopferspitz 19, 82152 Martinsried, Germany.