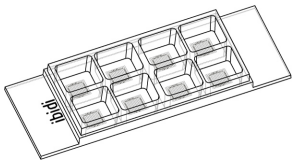


The ibidi product family is comprised of a variety of µ–Slides and µ–Dishes, which have all been designed for high–end microscopic analysis of fixed or living cells. The high optical quality of the material is similar to that of glass, so you can perform all kinds of fluorescence experiments with uncompromised resolution and choice of wavelength.

The µ–Slide 8 Well is an array of 8 square fields where cells can be cultivated and, subsequently, investigated with microscopical methods. It is intended for the optimization of experimental parameters like antibody dilution, seeding density, or the most effective drug concentration.

The Grid–500 is a grid structure for relocating events. It provides 100 distinguishable observation squares of 500 µm edge length. The grid is clearly visible by phase contrast microscopy and based on the high quality ibidi Standard Bottom. The outer dimensions and other parameters are identical to ibidi µ–Slide 8 Well.

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 polymer coverslip, 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/ polymer coverslip

Please note! The ibidi Standard Bottom is compatible with certain types of immersion oil only. A list of suitable oils can be found on page 3.

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) is listed in the following table.

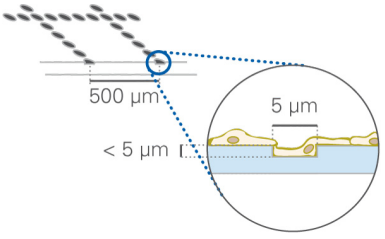
Conditions	
Shipping conditions	Ambient
Storage conditions	RT (15-25°C)

Shelf Life of Different Surfaces	
ibiTreat, Glass Bottom, ESS	36 months
Collagen, Poly-Lysine	18 months
Fibronectin	4 months

Characteristics of the Grid

The Grid–500 is made of small dots inside the ibidi plastic surface of ibidi µ–Slide 8 Wells. The structure is imprinted on the side on which cells are growing and does not effect cell growth, coating protocols, or surface properties. Proliferation and cell behavior is comparable with standard non–gridded slides. Cells and grid are in one focal plane. Please also refer to the instructions of ibidi µ–Slides for information on surfaces, coatings, and cell seeding.

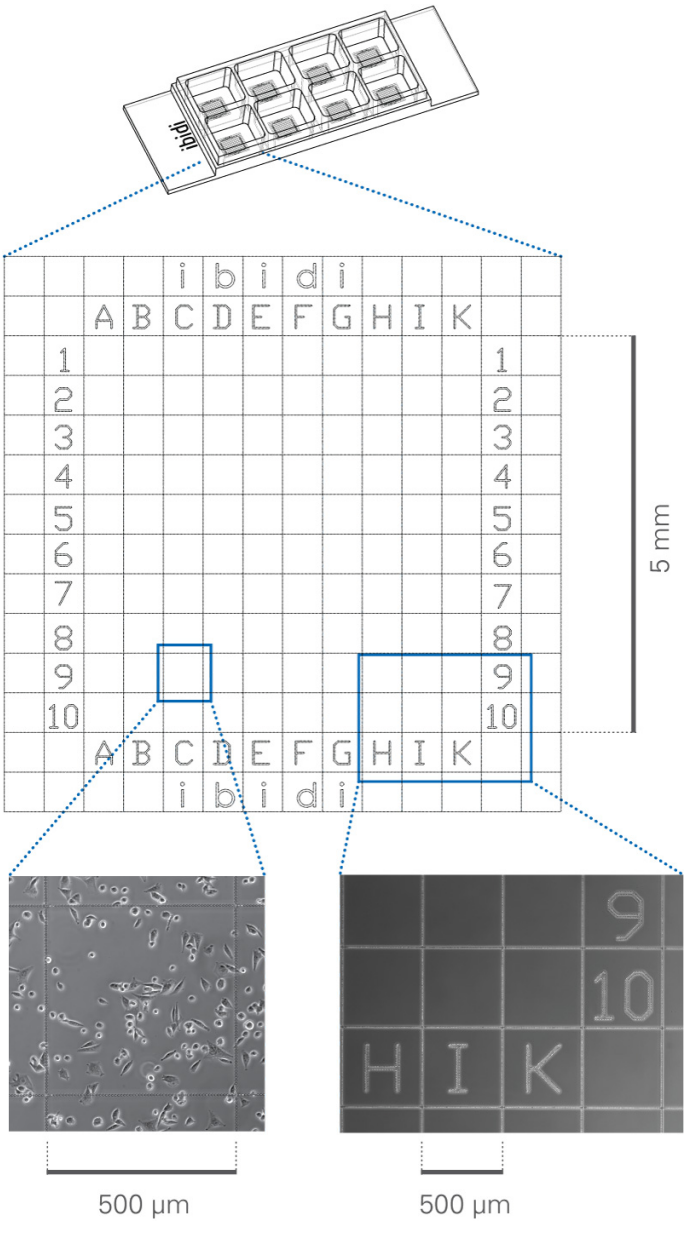
The grid is made of dots forming grooves, which are 5 µm (± 1 µm) wide and approximately 5 µm deep. Cells can grow in the grooves as well. We recommend using objective lenses up to 20×. Anyhow, the optical quality meets the requirements of 63× and 100× oil objective lenses as well (ibidi Standard Bottom, No. 1.5).



Geometry of the Grid–500

Geometry of the Grid–500	
Number of view fields	100
Repeat distance	500 µm
Groove width	5 µm (±1 µm)
Groove depth	<5 µm

The squares are centred in the wells and indicated by letters and numbers ranging from A to K (J not used) and 1 to 10.



Surface and Coating

The µ–Slide 8 Well Grid–500 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 for good cell growth. The uncoated surface is a very hydrophobic surface and allows no direct cell growth. It is suitable for specific coatings or suspension cells.

If you like to establish a particular coating for your demands we recommend to test your coating procedure on uncoated and ibiTreat µ–Slides, since some biomolecules adhere differently to hydrophobic or hydrophilic plastic surfaces.

- Prepare your coating solution according to the manufacturer's specifications or reference. Prepare your µ–Slide, ibiTreat or uncoated. Adjust the concentration to a coating area of 2.2 cm^2 and 300 µl.
- Apply 300 µl into the growth area. Make sure that the entire bottom is covered with liquid easily tilting or shaking the µ–Slide. Put on the lid and leave at room temperature for at least 30 minutes.
- Aspirate the solution and wash. Optionally, let dry at room temperature.

Detailed information about coatings is provided in Application Note 08 "Cell culture coating".

Seeding cells

- Trypsinize and count 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.
- Apply 300 µl cell suspension into each well of the µ–Slide. Avoid shaking as this will result in inhomogeneous distribution of the cells.
- Cover the slide with the supplied lid. Incubate at 37°C and 5 % CO_2 as usual.

Undemanding cells can be left in their seeding medium for up to three days and grow to confluence there. However, best results might be achieved when the medium is changed every 1–2 days. Carefully aspirate the old medium and replace it by 300 µl/well fresh medium.

Tip:

As you may know from 96 well plates, the bent meniscus at the air–liquid interphase in small open wells destroys the phase contrast effect of your microscope image. To avoid this problem, we recommend using our channel Slides such as the µ–Slides I Luer and µ–Slide VI $^{0.4}$ or a Ph+ Slide.

Preparation for Cell Microscopy

To analyze your cells, no special preparations are necessary. Cells can be observed live, or fixed directly in the µ–Slide on an inverted microscope. You can use any fixative of your choice. The µ–Slide 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

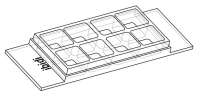
When using oil immersion objectives, use only the immersion oils specified in the table. The use of a non–recommended oil could lead to the damage of the plastic material and the objective.

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

Ordering Information

The µ–Slide 8 Well family comprises Slides with different surfaces and bottom characteristics. See table below for choosing your µ–Slide 8 Well.

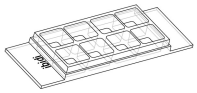
µ–Slide 8 Well



Cat. No.	Description
80826	**µ–Slide 8 Well ibiTreat**: #1.5 polymer coverslip, tissue culture treated, sterilized
80822	**µ–Slide 8 Well Collagen IV**: #1.5 polymer coverslip, sterilized
80823	**µ–Slide 8 Well Fibronectin**: #1.5 polymer coverslip, sterilized*
80824	**µ–Slide 8 Well Poly-L-Lysine**: #1.5 polymer coverslip, sterilized
80825	**µ–Slide 8 Well Poly-D-Lysine**: #1.5 polymer coverslip, sterilized*
80821	**µ–Slide 8 Well Uncoated**: #1.5 polymer coverslip, hydrophobic, sterilized

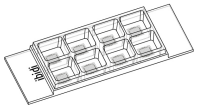
* available on request only

µ–Slide 8 Well Glass Bottom



Cat. No.	Description
80827	**µ–Slide 8 Well Glass Bottom**: 1.5H (170 µm ±5 µm) D 263 M Schott glass, sterilized

µ–Slide 8 Well Grid–500



Cat. No.	Description
80826-G500	**µ–Slide 8 Well ibiTreat Grid–500**: #1.5 polymer coverslip, tissue culture treated, grid repeat distance 500 µm, sterilized
80821-G500	**µ–Slide 8 Well Uncoated Grid–500**: #1.5 polymer coverslip, hydrophobic, grid repeat distance 500 µm, sterilized

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.