

The ibidi product family 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 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 Black 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 polymer material.

Material

ibidi μ -Slides, μ -Dishes, and μ -Plates are made of a polymer that has the highest optical quality. The polymer coverslip on the bottom 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 intended for one-time use and are not autoclavable, since they are only temperature-stable up to 80°C/175°F. Please note that gas exchange between the medium and the incubator's atmosphere occurs partially through the polymer coverslip, which should not be covered.

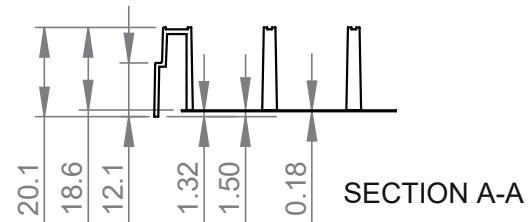
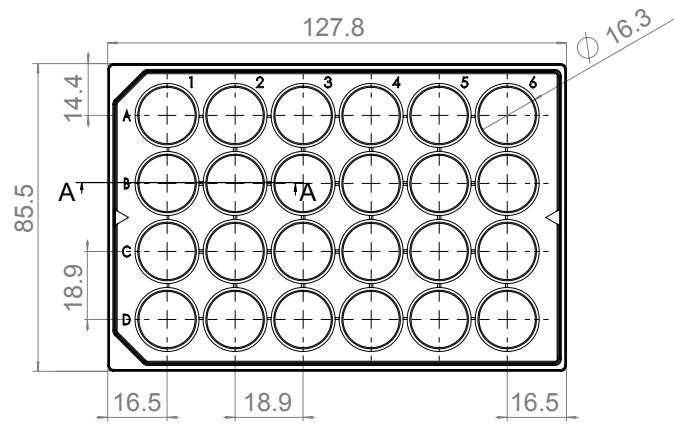
Optical Properties ibidi Polymer Coverslip

| | |
|---------------------------------|-----------------------|
| Refractive index n_D (589 nm) | 1.52 |
| Abbe number | 56 |
| Thickness | No. 1.5 (180 μ m) |
| Material | Polymer coverslip |

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

Geometry

The μ -Plate 24 Well Black provides standard geometry and numbering (A-D, 1-6).



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 | |
| ibiTreat, Uncoated | 36 months |

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

Dimensions of the μ -Plate 24 Well Black in mm

| | | |
|-----------------------|-------|-----------|
| Length | 127.8 | ± 0.2 |
| Width | 85.5 | ± 0.2 |
| Height with lid | 22.5 | ± 0.4 |
| Height without lid | 20.1 | ± 0.4 |
| Well to well distance | 18.9 | ± 0.1 |
| Well clearance | 1.32 | ± 0.1 |
| Focal offset | 1.50 | ± 0.1 |

Instructions

μ-Plate 24 Well Black

| Single Well Parameters | |
|-------------------------|---------------------|
| Single well diameter | 16.3 ± 0.1 mm |
| Single well depth | 18.6 ± 0.2 mm |
| Volume | 1 ml |
| Growth area | 1.9 cm ² |
| Coating area using 1 ml | 4.3 cm ² |

| Accuracy of the Bottom | |
|------------------------|-------------------------|
| Inner well flatness | ± 10 µm |
| Whole plate flatness | ± 25 µm |
| Bottom | ibidi Polymer Coverslip |

Surface

The μ-Plate 24 Well Black 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 Black can be done yourself following the procedure in the section **Coating Your μ-Plate 24 Well Black**.

Coating Your μ-Plate 24 Well Black

The hydrophobic, uncoated version of the μ-Plate 24 Well Black 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 surface of the μ-Plate 24 Well Black, 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 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 2.5-6.5 ×

10⁴ 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 Black with the supplied lid. Incubate at 37°C and 5 % CO₂ as usual.

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 fresh medium.

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.

Chemical Compatibility

The following table provides some basic information on the chemical and solvent compatibility of the μ-Plate 24 Well Black. For a full list of compatible solvents and more information on chemical compatibility, please visit the FAQ section on [ibidi.com](#).

| Chemical / Solvent | Compatibility |
|--------------------|--|
| Methanol | yes |
| Ethanol | yes |
| Formaldehyde | yes |
| Acetone | yes, without lid |
| Mineral oil | no |
| Silicone oil | yes |
| Immersion oil | See Immersion Oil on page 3. |

Microscopy

To analyze your cells, no special preparations are necessary. Cells can be directly observed live or fixed, preferably on an inverted microscope. The bottom cannot be removed. For optimal results in fluorescence microscopy and storage of fixed and stained samples, ibidi provides mounting media (50001 and 50011) optimized for μ-Dishes, μ-Slides, and μ-Plates.

Immersion Oil

When using oil immersion objectives with the ibidi Polymer Coverslip, use only the immersion oils specified in the table below. The use of any non-recommended oil could damage the ibidi Polymer Coverslip. The resulting leakage may harm objectives and microscope components. All immersion oils that are not listed in the table below should be considered as non-compatible.

| Company | Product | Ordering No. | Lot Number | Test Date |
|-----------|-----------------------------|---------------|------------|-----------|
| ibidi | ibidi Immersion Oil | 50101 | 16-12-27 | 01/2017 |
| Cargille | Type A | 16482 | 100592 | 01/2017 |
| Cargille | Type HF | 16245 | 92192 | 01/2017 |
| Carl Roth | Immersion oil | X899.1 | 414220338 | 01/2017 |
| Leica | Immersion Liquid | 11513859 | n.a. | 03/2011 |
| Nikon | Immersion Oil F2 30cc | MXA22192 | n.a. | 01/2020 |
| Nikon | Silicone Immersion Oil 30cc | MXA22179 | 20191101 | 01/2020 |
| Olympus | Silicone Immersion Oil | SIL300CS-30CC | N4190800 | 01/2017 |
| Zeiss | Immersol 518 F | 444960 | 160706 | 01/2017 |
| Zeiss | Immersol W 2010 | 444969 | 101122 | 04/2012 |

Ordering Information

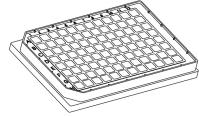
The ibidi μ-Plates are available in the following product versions.

μ-Plate 24 Well Black



| Cat. No. | Description |
|----------|--|
| 82406 | μ-Plate 24 Well Black ibiTreat: #1.5 polymer coverslip, tissue culture treated, sterilized |
| 82401 | μ-Plate 24 Well Black Uncoated: #1.5 polymer coverslip, hydrophobic, sterilized |

μ-Plate 96 Well Black



| Cat. No. | Description |
|----------|--|
| 89626 | μ-Plate 96 Well Black ibiTreat: #1.5 polymer coverslip, tissue culture treated, sterilized |
| 89621 | μ-Plate 96 Well Black Uncoated: #1.5 polymer coverslip, hydrophobic, sterilized |

For research use only!

Further information can be found at ibidi.com. For questions and suggestions please contact us by e-mail info@ibidi.de or by telephone +49 (0)89/520 4617 0.

© ibidi GmbH, Lochhamer Schlag 11, 82166 Gräfelfing, Germany.