

making a difference

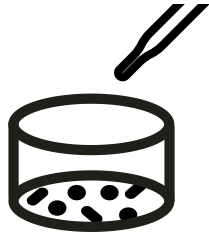


**EXPLORE  
OUR WORLD OF  
MICROPLATES**

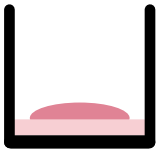
Microplate Selection Guide



**greiner**  
BIO-ONE

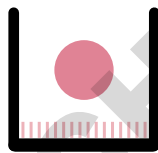


### CELL CULTURE (p. 8)



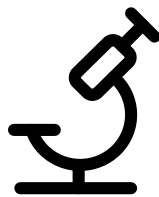
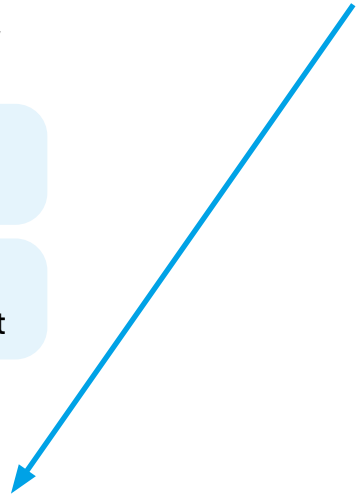
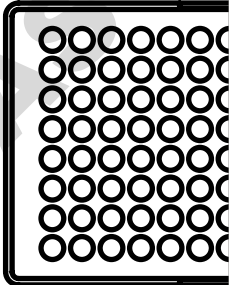
Adherent

- CELLSTAR® TC
- CELLCOAT® protein coating
- Advanced TC



Non-adherent/  
suspension

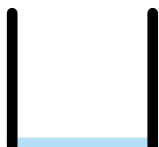
- CELLSTAR® suspension
- CELLSTAR® cell-repellent



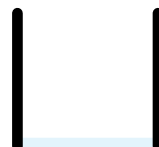
### MICROSCOPY (p. 18)



µClear® film bottom



Cycloolefin film bottom



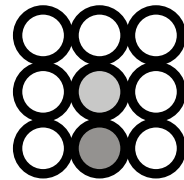
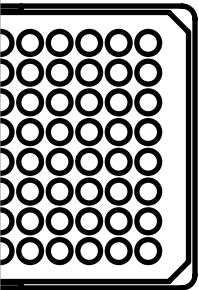
Glass bottom



### STORAGE (p. 1)

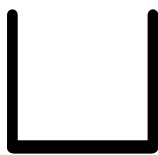


Polypropylene & cycloolefin plates

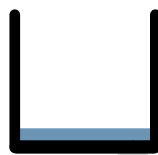


## SCREENING

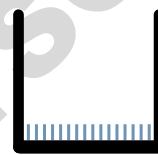
(p. 12)



Non-treated



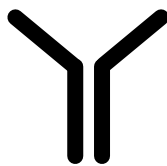
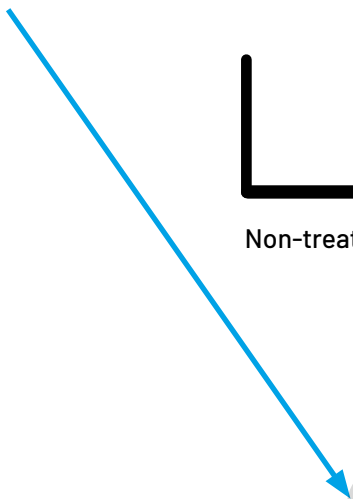
High binding /  
sterile



Non-binding

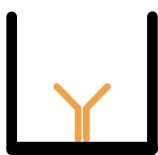


UV  
spectroscopy

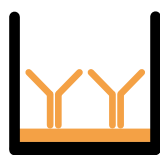


## IMMUNOLOGY

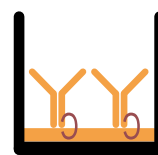
(p. 14)



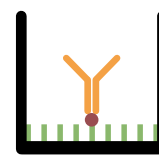
Med. binding



High-binding



Covalent  
binding



Streptavidin  
coating

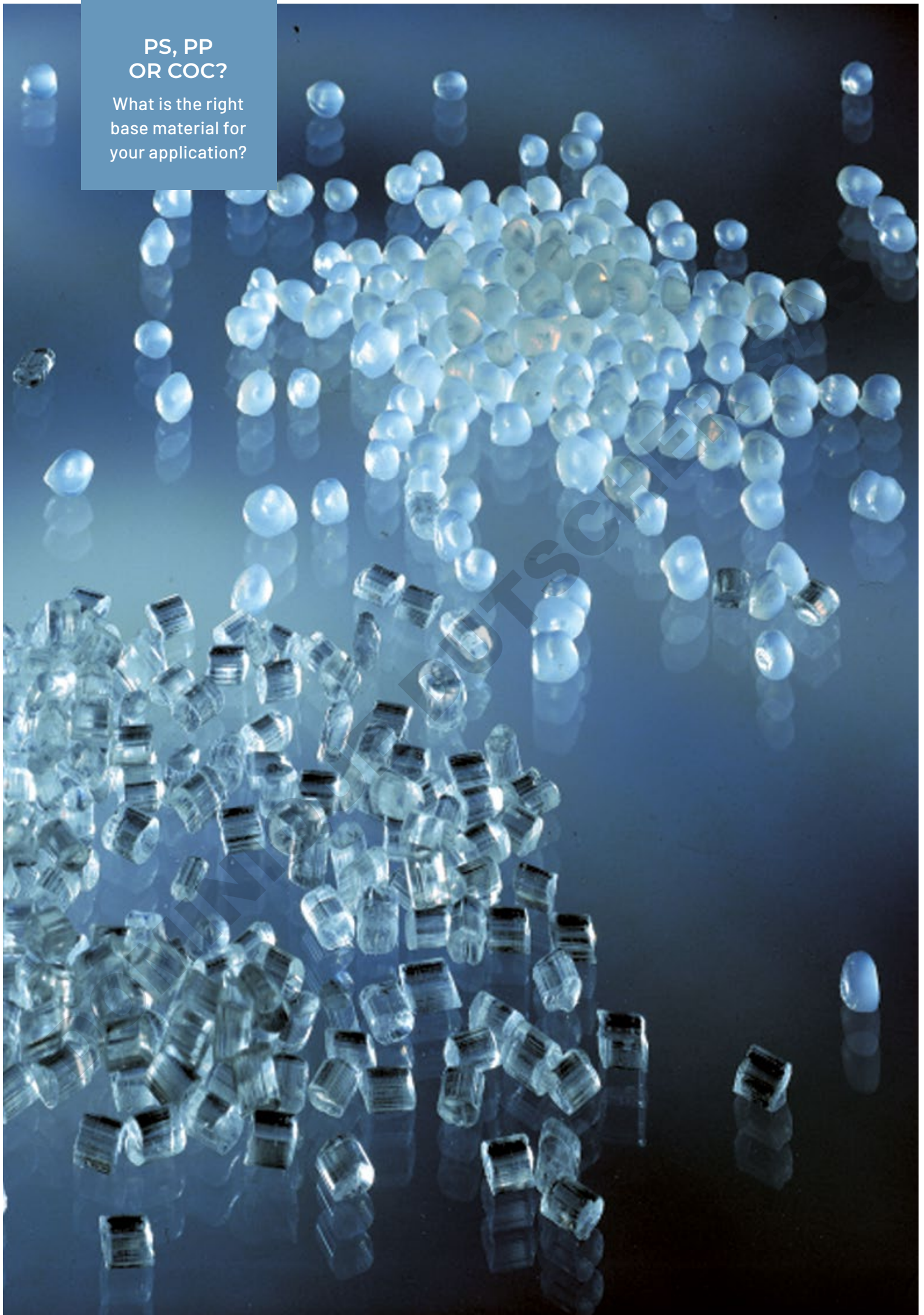
AGE

6)

ylene  
olefin  
es

## PS, PP OR COC?

What is the right  
base material for  
your application?



## 1. INTRODUCTION

Continued progress in research and related technologies, such as microscopy, imaging, detection and liquid handling systems, has given rise to a wide variety of platforms used in basic science, biotechnology and pharmaceutical drug development. Today, researchers need to select

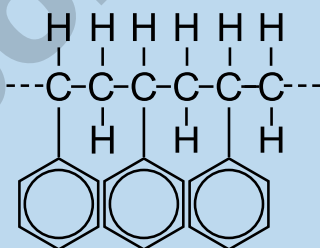
application-specific microplates among a broad range of products that differ in format, design, base material, colour, surface properties and bottom configuration. The intent of this brochure is to provide an overview of microplates available from Greiner Bio-One, with a focus on applications.

## 2. GENERAL MICROPLATE FEATURES

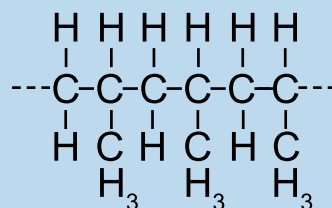
### 2.1 BASE MATERIAL

**Polystyrene** is the most extensively used material for plastic laboratory ware. The highly transparent resin is ideally suited for both microscopic imaging and optical measurements. Due to its chemical nature, polystyrene is a hydrophobic compound; however, its properties can be adjusted with a variety of physical surface treatments or coatings to accommodate requirements for multiple diverse applications.

**Polypropylene** is characterised by a high resistance to common chemicals (e.g. DMSO) and thermal stability (-196 °C to +121 °C). Polar molecules like DNA or proteins are binding less to polypropylene than to polystyrene. One drawback of polypropylene is its limited transparency; however, this feature is not typically required for the primary application of storage plates and vessels. Commonly, vessels made of polypropylene are not surface treated or coated.



Polystyrene (PS)



Polypropylene (PP)

### CHEMICAL STRUCTURE

of microplate  
base materials

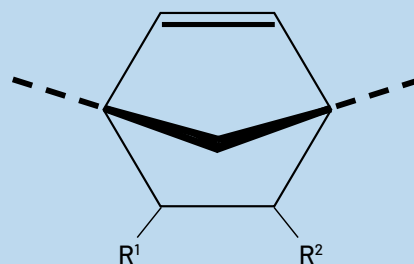
Cycloolefin microplates are suited for spectroscopic measurements and sophisticated optical requirements.



**Cycloolefin** is the material of choice for microplates with special requirement profiles. A low level of autofluorescence, along with exceptional transparency in lower UV wavelengths, enables cycloolefin microplates to be utilised for spectroscopic measurements in the UV range (UV-Star® microplates). The chemical stability of cycloolefin to polar solvents like DMSO, together with an extraordinarily low vapour diffusion rate, render the base material

very suitable for the production of compound storage microplates, and the dimensional stability is additionally beneficial for microplate use within fully automated systems. Moreover, cycloolefin's glass-like optical properties, when combined with a respective surface treatment, facilitate use of cycloolefin microplates for cell culture applications with sophisticated optical requirements such as high-resolution confocal microscopy and high-content screening.

## CHEMICAL STRUCTURE of cycloolefin



Norbornene (monomer of cycloolefin)

**Black, white  
or clear?**

Find the right  
colour for your  
assay!

## 2.2 PIGMENTATION

**Black** pigmented microplates are commonly used for fluorescence applications, whereas **white** pigmented microplates typically support luminescence measurements, and are sometimes used to enhance fluorescence signal intensity. Both pigmentations help overcome critical issues for these techniques, such as background, autofluorescence, and well-to-well crosstalk.

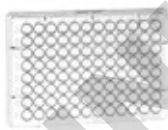
Pigmentation does not impact the material or surface chemistry, and black or white polystyrene microplates are available with different surface

properties. Polypropylene microplates are as well available with black and white pigmentation and offer lower biomolecule binding and higher thermal and chemical resistance than polystyrene.

## 2.3 SURFACE PROPERTIES

At the well surface, interaction between the sample and the microplate takes place. Therefore surface properties play an important role for the functionality of a vessel. Surface properties can be modified in many ways, whether by physical, chemical or coating methods, to fulfill various demands.

## MICROPLATE COLOUR & CORRESPONDING APPLICATIONS



### Colorimetric Measurements

Transparent polystyrene microplates with solid bottom



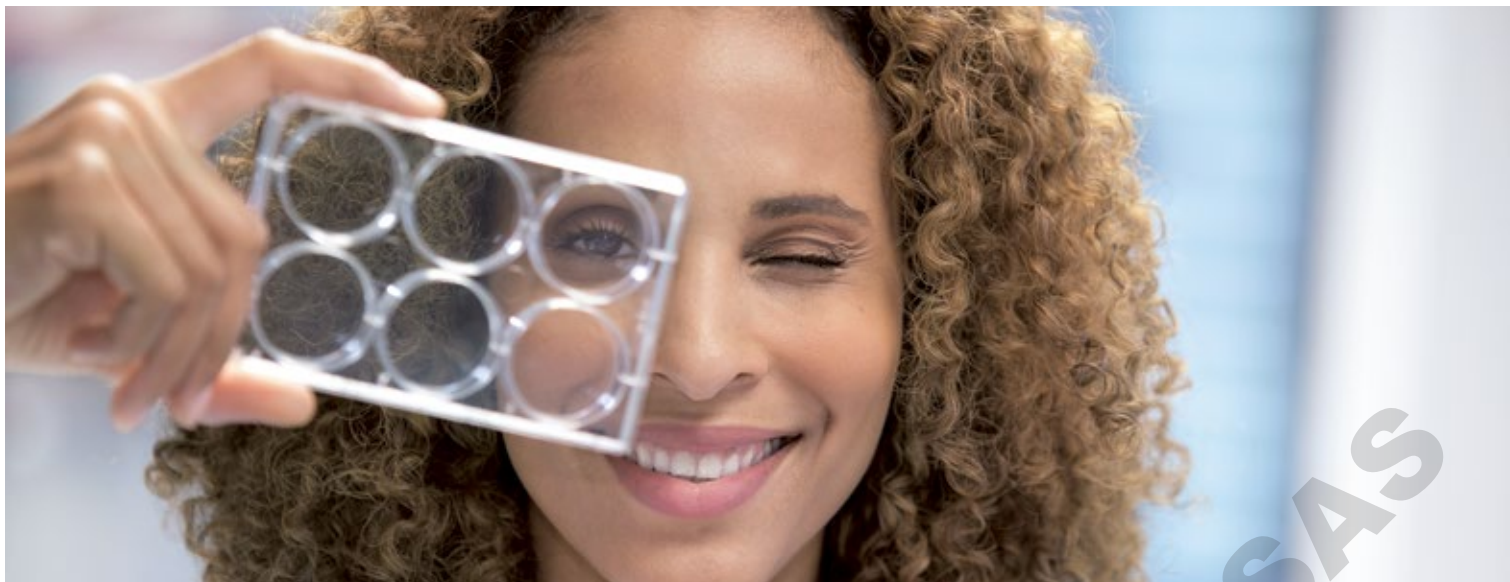
### Fluorescence Measurements

- / **Top reading:**  
Black microplates with solid bottom, white microplates to enhance signal intensity
- / **Bottom reading & microscopy:**  
Black microplates with transparent film bottom or glass bottom



### Luminescence Measurements

- / **Top reading:**  
White microplates with solid bottom
- / **Bottom reading & microscopy:**  
White microplates with transparent film bottom



## 3. MICROPLATES BY APPLICATION

### 3.1 CELL CULTURE

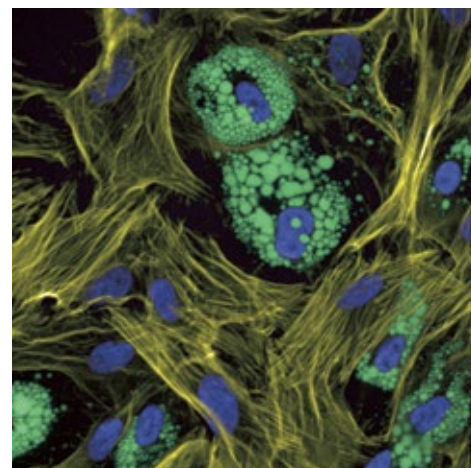
#### 3.1.1 Adherent Cell Culture

**CELLSTAR® TC** (TC = Tissue Culture) is the standard surface for classical cultivation of adherent cells. **CELLSTAR® TC** products undergo a special physical surface treatment, leading to the incorporation of polar groups such as carboxyl and hydroxyl residues, which functionalises the hydrophobic polystyrene surface to result in improved, consistent cell attachment. **CELLSTAR® TC** products are sterile, and can be stored at room temperature.

For fastidious, primary or sensitive cells, cells cultivated under restricted growth conditions (serum-free or serum-reduced), or cells stressed by transduction or transfection,

Greiner Bio-One offers the synthetic **Advanced TC** surface and the **CELLCOAT®** product line.

The surface of the **Advanced TC** cell culture vessels is chemically modified to positively influence cellular features and functions. Enhanced cell attachment and higher proliferation rates improve and accelerate cell expansion. The positive effect of the **Advanced TC** surface is particularly apparent following cellular stress induced by transfection or transduction processes. In contrast to biological coatings, the surface chemistry is synthetic. **Advanced TC** products are sterile, and can be stored at room temperature.



Adipogenesis of human mesenchymal stem cells on 384 well polystyrene film bottom microplates (Item No. 781091).





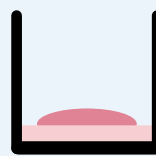
## CELL CULTURE

The **CELLCOAT**<sup>®</sup> product line comprises cell culture vessels which are coated with proteins of the extracellular matrix (Collagen Type I, Fibronectin, Laminin) or synthetic proteins (Poly-D-Lysine, Poly-L-Lysine). As a synthetic molecule, Poly-Lysine is free from contamination with other proteins. Biological coatings facilitate the growth of many cell types, including hepatocytes, muscle cells, epithelial/endothelial cells, neural cells and transfected cell lines. Many otherwise difficult-to-cultivate cells adhere to biological coatings,

thereby enabling successful culture. Additionally, for certain cell lines, protein coating can have a positive influence on differentiation and morphology. **CELLCOAT**<sup>®</sup> surfaces are also highly suitable for serum-free and serum-reduced cell cultivation, promotion of cell adhesion and stressful procedures like transfection or automated washing.

For microplates especially developed to meet the requirements of high-content screening applications, please refer to chapter 3.5 (p. 18-19).

## MICROPLATES FOR ADHERENT CELL CULTURE



### PROMOTION OF CELL ATTACHMENT

#### CELLSTAR<sup>®</sup> TC

- / Standard cell culture
- / Adherent cell lines

#### CELLCOAT<sup>®</sup>

- / Improved cell adhesion and proliferation
- / Reduced-serum or serum-free cultivation
- / Improved growth of primary cells
- / Differentiation of individual cell types

#### Advanced TC

- / Cultivation of fastidious and sensitive cell lines
- / Reduced-serum or serum-free cultivation
- / Improved transfection and transduction



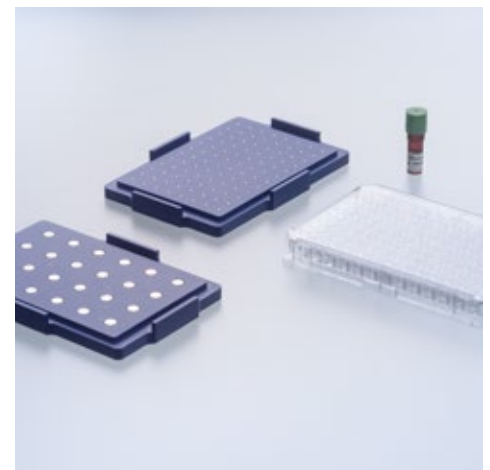
### 3.1.2 Non-adherent and 3D Cell Culture

**CELLSTAR® suspension culture** vessels are well suited for suspension culture of non-adherent cells due to no polarity or asymmetric charge allocation of the surface which does not enable hydrophilic interactions between the surface and the cells. CELLSTAR® suspension products feature a strongly hydrophobic surface and are sterile.

The **CELLSTAR® cell-repellent** microplates feature a sterile, innovative chemical surface modification, which has been specifically developed to effectively prevent the attachment of semi-adherent and adherent cell lines.

Beside conventional two-dimensional (2D) monolayer cell culture, 3D cell culture models are becoming a routine tool to

enable the expression of extracellular matrix (ECM) components as well as the formation of cell-cell and cell-matrix interactions. These characteristics are important for replicating in-vivo cell differentiation, proliferation, and function in vitro. Inhibition of cell attachment and cell-surface interaction enables the cell-cell interaction to dominate and make the cell-repellent surface an ideal platform for 3D cell culture applications such as the spontaneous formation of spheroids, the cultivation of stem cell aggregates and as indispensable part of the magnetic 3D cell culture technology. Additionally the surface does not degrade or leach under common cell culture conditions, rendering an ideal substrate for native cell culture experiments and long-term cultivation in hydrogels.



96 Well Bioprinting Kit for magnetic 3D cell culture

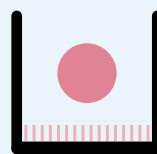


## CELL CULTURE

The core technology of Greiner Bio-One's **Magnetic 3D Cell Culture (m3D)** is the magnetization of cells with biocompatible NanoShuttle™-PL. The formation of one spheroid per well in an F-bottom plate with cell-repellent surface is forced by magnets either by levitation or bioprinting. The magnetic forces work as an invisible scaffold that rapidly and gently aggregates cells and induces cell-cell interactions and ECM synthesis to form structurally and biologically representative 3D models in vitro.

The m3D system overcomes the limitations of other platforms by enabling rapid formation of spheroids, reproducible and scalable in size for high-throughput formats (96, 384 and 1536 well) and without limitation to cell types. Together with commercially available biochemical assays the m3D technology provides an ideal combination for high-throughput compound screening that encompasses pre-animal toxicity screens, anti-cancer agents, cardiovascular drugs and well as many other important drug discovery targets.

## MICROPLATES FOR NON-ADHERENT CELL CULTURE



### PREVENTION OF CELL ATTACHMENT

#### CELLSTAR® suspension

- / Non-adherent cells
- / Hybridoma and embryonic stem cells
- / Suspension-adapted cells

#### CELLSTAR® cell-repellent

- / Spheroid culture of tumour cells
- / Aggregation of stem cells
- / Suspension culture of semi-adherent and adherent cell lines
- / 3D culture in hydrogels



### 3.2 SCREENING AND UV/VIS SPECTROSCOPY

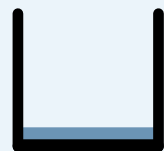
For biochemical screening applications, microplates made of **polystyrene** without surface treatment (**non-treated**) are frequently the plate of choice. Greiner Bio-One polystyrene microplates are manufactured of carefully selected raw material batches and demonstrate reproducibly low biomolecular binding. Due to their material properties, **polypropylene** microplates (see also chapter 3.4, p. 16-17) feature less biomolecule adsorption than polystyrene. However,

for very sensitive applications, even low amounts of biomolecular binding can interfere with the assay.

Greiner Bio-One's **non-binding surface** for microplates effectively prevents binding. Characterised by low protein, peptide, DNA and RNA binding properties, the non-binding surface increases assay sensitivity by reducing background and, therefore, improving signal-to-noise ratio. The non-binding surface is

## SCREENING MICROPLATES

### PROTEIN ADSORPTION



#### Non-binding PS microplates

- / Sensitive biochemical assays

#### Polypropylene microplates

- / Storage applications
- / Biochemical assays

#### Untreated PS microplates

- / Homogeneous assays
- / Biochemical assays

#### High-binding PS microplates

- / Heterogeneous assays
- / Immunological assays (ELISA, FIA, LIA) → p. 14



achieved through a chemical modification of the microplate surface. It remains stable under common assay conditions, and does not degrade during short-term storage.

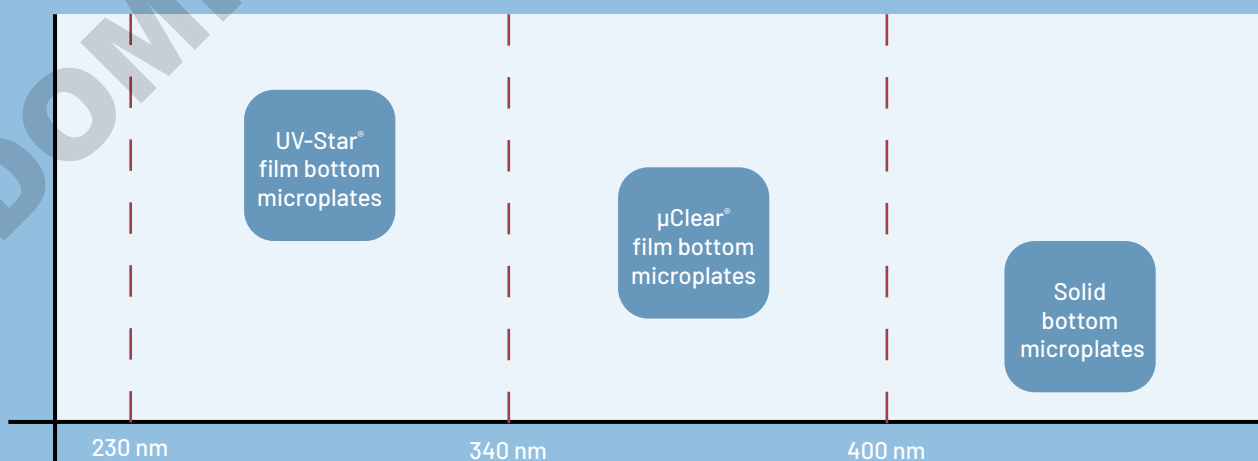
**High-binding** polystyrene microplates can be used for applications where sterile microplates are needed. Sterile polypropylene microplates are available upon request.

For colorimetric measurements in the visible wavelength range, transparent polystyrene microplates are ideal due to the high clarity of polystyrene. However, the transmission rate of most solid

polystyrene vessels and plates drops sharply at approximately 400 nm. The usage of thin transparent film bottoms in black or white framed **μClear**<sup>®</sup> plates extends detection capability down to 340 nm. Microplates with **μClear**<sup>®</sup> film bottom are also an excellent choice for standard microscopic applications (see also chapter 3.5, p. 18-19).

For measurements in the lower UV range, e.g. for the measurements of DNA or protein concentration, **UV-Star**<sup>®</sup> film bottom microplates manufactured entirely out of cycloolefin with transmission down to 230 nm are mandatory.

## SUITABILITY OF MICROPLATES WITH REFERENCE TO WAVELENGTH





### 3.3 IMMUNOLOGY

For assays based on the immobilisation of biomolecules to the surface of microplates, polystyrene is by far the most commonly used base material. Due to its chemical nature, polystyrene is a hydrophobic compound and non-treated polystyrene plates feature hydrophobic characteristics. If attachment to the solid surface is based upon passive adsorption, e.g. in ELISA\*, physiochemical forces like hydrophobic bonds, hydrophilic interactions and H-bonding are relevant. Therefore, ELISA microplates are most often physically treated to introduce a defined number of hydrophilic groups to the microplate surface.

Greiner Bio-One offers both a **medium-binding** and a **high-binding** surface for passive adsorption. The high-binding surface features a relatively high number of polar groups, whereas the number of polar groups is limited on the medium-binding surface. The determination of which surface is best suited for a specific application should be evaluated empirically, as, in addition to surface properties, it is important to consider issues such as non-specific binding and other assay parameters to make the appropriate selection.



96 well ELISA strip plates

\* ELISA = Enzyme-linked Immunosorbent Assay  
FIA = Fluorescence Immunoassay  
LIA = Luminescence Immunoassay



For some applications, adsorptive binding to a physically modified polystyrene surface is not feasible. One alternative is to take advantage of the strong non-covalent interaction between streptavidin and biotin. Here, **streptavidin-coated microplates** act as solid surface, upon which biotinylated biomolecules can be attached very effectively, enabling a robust tool for microplate binding assays.

Microplates with a functional 3-dimensional matrix as surface offer the possibility for **covalent binding** of biomolecules to the microplate surface. Coupling can take place in standard coating buffers and needs no additional steps. Due to the nature of the 3-dimensional functional matrix, non-specific background is very low, and, in comparison to physically treated microplates, the 3D matrix enhances signal intensity.

## IMMUNOLOGY MICROPLATES

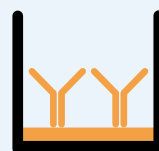
### MEDIUM-BINDING



#### Low number of polar groups

- / Medium binding capacity
- / Clear microplates (MICROLON 200): ELISA
- / Black microplates (FLUOTRAC 200): FIA
- / White microplates (LUMITRAC 200): LIA

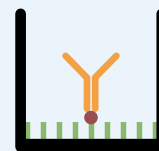
### HIGH-BINDING



#### High number of polar groups

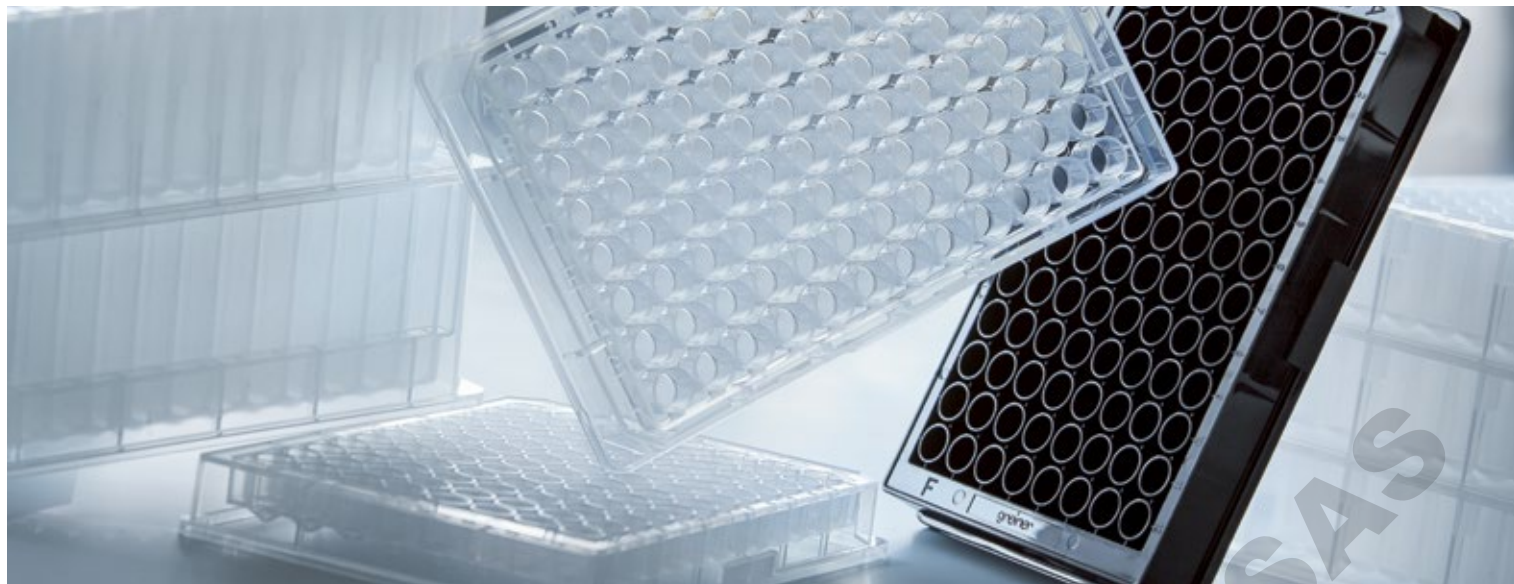
- / High binding capacity
- / Clear microplates (MICROLON 600): ELISA
- / Black microplates (FLUOTRAC 600): FIA
- / White microplates (LUMITRAC 600): LIA

### STREPTAVIDIN-BIOTIN BINDING



#### Binding of biotinylated molecules

- / For binding of biotinylated targets
- / High chemical stability
- / Transparent, black and white pigmentation



### 3.4 STORAGE PLATES

Traditionally, microplates used for storage of active reagents, patient samples or biomolecules are made of **polypropylene** (see also chapter 3.2, p. 12-13). Storage plates are characterised by biological inertness, resistance to numerous solvents, e.g. DMSO, and a wide range for temperature resistance. **MASTERBLOCK®** storage plates feature as well elevated well walls to facilitate sealing. The footprint is compatible with automated systems.

Polypropylene storage plates are available from the 96 to the 1536 well format and with U- and V-bottom well design. The 384 **Deep Well MASTERBLOCK®** extends the range of polypropylene storage plates. Its conical well shape enables precise pipetting with almost no dead volume in parallel with a maximised well volume. Therefore the Deep Well **MASTERBLOCK®** is the ideal solution for the storage of compound libraries.

	Polypropylene (PP)	Cycloolefin (COC/COP)	Polystyrene (PS)
Temperature stability	✓✓✓	✓✓	✓
Breakage resistance	✓✓✓	✓✓✓	✓
Chemical resistance	✓✓✓	✓✓✓	✓
Transparency	✓	✓✓✓	✓✓✓

Material resistance of polypropylene and cycloolefin in comparison to polystyrene.





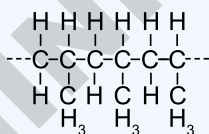
STORAGE

Special demands on storage plates are made by acoustic liquid handling applications. Therefore Greiner Bio-One's **compound storage plates** meant for acoustic liquid handling are subject to stringent production specifications to ensure constant well bottom features. These microplates are deionised after production and packed in antistatic bags. Beside a 384 well **polypropylene** storage plate, Greiner Bio-One offers a range of

**cycloolefin** storage plates for acoustic liquid handling in the 384 well and 1536 well format.

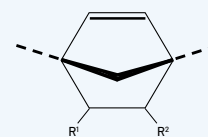
**Cycloolefin** combines many utile features: resistance to polar solvents like DMSO, high optical clarity and glass-like optical properties, excellent water and vapour barrier functions to minimise evaporation, nearly no leaching extractables and low biomolecule binding.

## STORAGE MICROPLATES



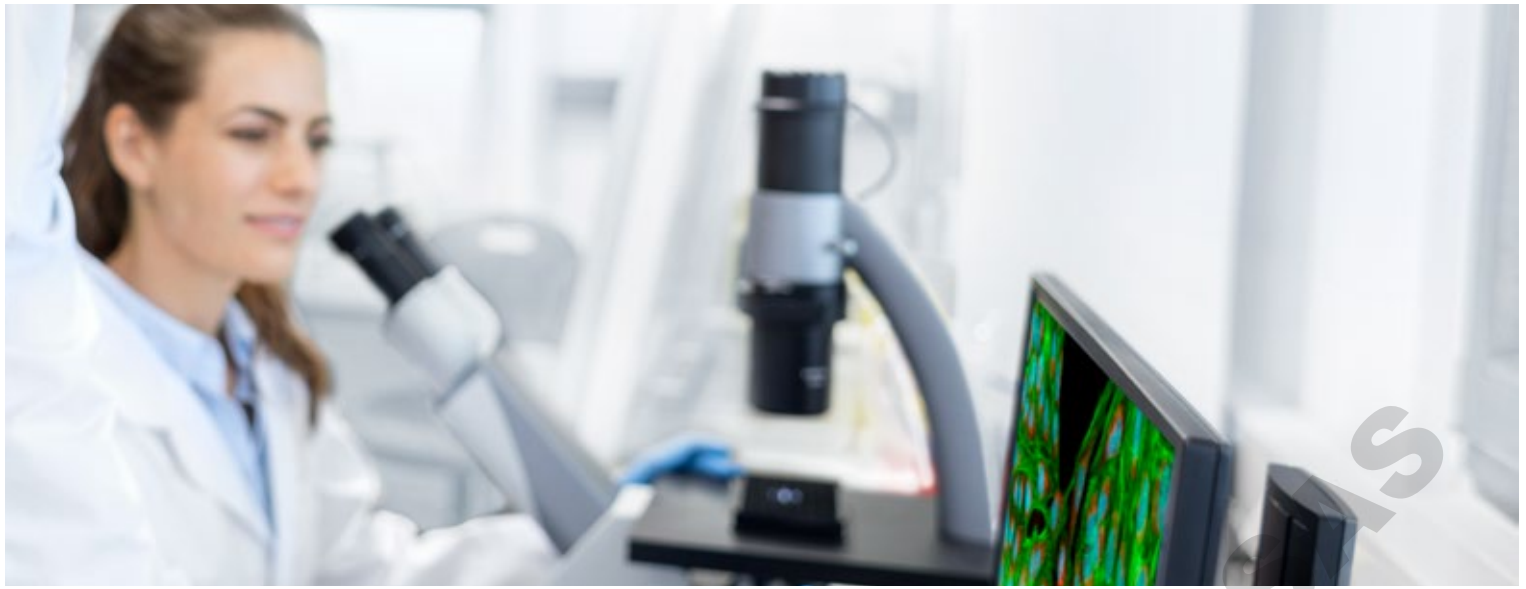
### Polypropylene Microplates / MASTERBLOCK®

- / Compound storage
- / Sample collection
- / Sample mixing
- / Transport
- / Screening
- / Acoustic Liquid Handling



### Cycloolefin Microplates

- / Compound storage
- / Acoustic liquid handling
- / Sample preparation



### 3.5 MICROSCOPY AND HIGH-CONTENT SCREENING

New applications in high-throughput and high-content screening, as well as high-resolution and confocal microscopy, have increased the demand for microplates with pigmented walls and clear bottom. The product portfolio of Greiner Bio-One contains clear bottom microplates either with glass or a high-quality film bottom.

**μClear® film bottom microplates** combine a pigmented frame with a transparent bottom, a prerequisite for luminescence and fluorescence applications where bottom-reading or microscopy are involved. Due to the optimised thickness of the film, the

intrinsic autofluorescence of polystyrene is minimised. Black and white μClear® microplates are available both non-treated and with a wide variety of surface properties and coatings well-suited for standard detection and microscopic applications.

**SCREENSTAR microplates with cycloolefin film bottom** are optimised for the specialised requirements of high-content screening and high-resolution microscopy. The 190 μm cycloolefin film bottom guarantees maximum resolution, even at high microscopic magnification, and the physical surface treatment assures a proven performance



## MICROSCOPY

for consistent cell attachment. SCREENSTAR microplates provide a recessed bottom to allow full use of high-magnification oil or water immersion objectives with access to all microplate peripheral wells, including perimeter and corner positions

**CELLview glass bottom microplates** are designed for demanding and high-resolution microscopic applications. They consist of a cycloolefin-based black frame with a 0.17 mm thin borosilicate glass bottom

providing superior images of in-vitro cultures. Analogous to the SCREENSTAR microplates, the geometry is optimised for high-resolution microscopy that allows imaging with short working distance. The round and conical well design reduces the meniscus effect in order to assure equal cellular distribution and constant imaging results. An appropriate surface treatment improves cellular attachment and growth.

## MICROPLATES FOR MICROSCOPY

### BASIC MICROSCOPIC APPLICATIONS

#### **μClear® microplates (190 μm polystyrene film bottom)**

- / Optimised for standard microscopy with low to medium magnification
- / Available with various tissue culture surfaces

### ADVANCED MICROSCOPIC APPLICATIONS

#### **CELLview cell culture microplates (175 μm glass bottom)**

- / For high-resolution microscopy
- / Reduced well bottom elevation optimised for low working distances
- / Maximal planarity
- / Best optical properties

#### **SensoPlate glass bottom microplates (175 μm glass bottom)**

- / For fluorescence correlation spectroscopy, confocal microscopy and single molecule detection
- / Best optical properties
- / Untreated glass surface

#### **SCREENSTAR microplates (190 μm cycloolefin film bottom)**

- / For complex microscopic applications in high-content screening (HCS)
- / Reduced well bottom elevation optimised for low working distances
- / Excellent optical properties
- / Available with various tissue culture surfaces



## 4. LITERATURE ABOUT MICROPLATES

This chapter gives you an overview of our publications, application notes and reports as well as our Greiner Bio-One Forum issues and brochures about microplates. All documents are published as pdf files

on our website. Just search for the respective article number in the search function of the download center. You can also order a printed copy via e-mail to [info@de.gbo.com](mailto:info@de.gbo.com).

### Greiner Bio-One Forum

Language: english

Item No.	Title	Products
F071104	Advanced TC: An innovative surface improving cellular assays	Advanced TC
F073777	CELLSTAR® cell culture vessels with cell-repellent surface	Cell-repellent
F073121	96 well half area microplates and their application in fluorescence, luminescence and transmission measurements	Half Area
F073120	SCREENSTAR: A 1536 well microplate for high-content and high-throughput screening	SCREENSTAR
F073787	SCREENSTAR and CELLview: microplates for advanced microscopy	SCREENSTAR, CELLview
F073000	A 384 well storage plate reducing compound consumption and supporting assay miniaturisation	Storage plates
F073795	1536 well cycloolefin microplate for compound storage and acoustic liquid handling	Storage plates
F073004	Microplates for Enzyme Linked Immunosorbent Assays (ELISA)	ELISA
F073013	Sealers for microplates and their areas of application in molecular biology and cell culture	Sealers



Link to our  
download center

## Application Notes

Language: english

Item No.	Title	Products
F010003	Selection of cell culture surfaces for the adipogenic differentiation of human mesenchymal stem cells (hMSC)	CELLSTAR® TC, CELLCOAT®, Adv. TC
F071105	siRNA dependent gene silencing in HeLa cells cultivated on various cell culture surfaces	CELLSTAR® TC, CELLCOAT®, Adv. TC
F073117	Improved cultivation and differentiation of embryonic stem cells	CELLSTAR® TC, CELLCOAT®, Adv. TC
F073022	Influence of washing steps on cell attachment: Comparison of PDL-coated and cell culture treated microplates	CELLSTAR® TC, CELLCOAT®
F073041	UV/VIS spectroscopy in microplates UV-Star®, µClear®, MICROLON and CELLSTAR®	CELLSTAR® TC, ELISA, UV-Star®, µClear®
F073106	Insulin ELISA on high binding MICROLON 600 and CELLSTAR® microplates	CELLSTAR® TC, ELISA
F073113	Cultivation and differentiation of human adipose derived mesenchymal Stem Cells with CELLSTAR® and CELLCOAT® cell culture products	CELLSTAR® TC, CELLCOAT®
F074058	Establishing a cell culture assay based on time-resolved fluorescence resonance energy transfer (TR-FRET) for screening G-Protein coupled receptors	CELLSTAR® TC
F073103	Enhanced transfection efficiency on protein coated microplates	CELLCOAT®
F073118	Influence of coating buffer and incubation conditions on ELISA performance	ELISA
F076036	Advanced TC: A cell culture surface improving the cultivation and differentiation of embryonic stem cells	Advanced TC
F073797	CELLSTAR® microplates with cell-repellent surface as platform for BIOMIMESYS®, a new generation of a mimetic hydrogel for 3D cell culture	Cell-repellent

## Brochures

Language: english

Item No.	Title	Products
F071067	Cell culture	Cell culture vessels
F071076	3D cell culture	3D cell culture
F073917	Intelligent solutions for sample storage	Storage plates
F073788	High-quality consumables and accessories for sample tracking and storage	Storage plates



## 5. BARCODE SERVICE FOR MICROPLATES

### 5.1 GENERAL INFORMATION

Eliminating the use of barcodes for sample tracking and sample management in today's routine work in pharma research and diagnostics is unthinkable, given the significantly increasing amounts of data.

Barcode systems simplify and expedite work processes. In addition, they permit the unequivocal identification of labelled samples at any time and help minimise errors due to sample mix up in manual data collection.

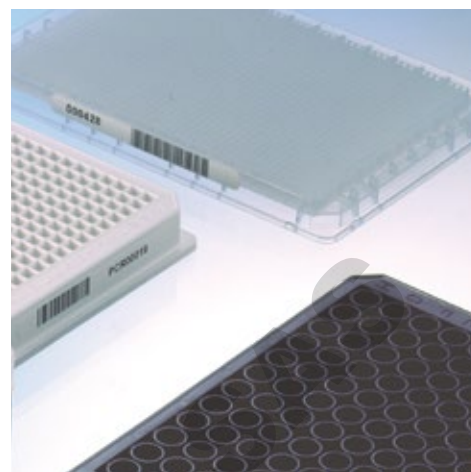
Greiner Bio-One offers a comprehensive barcode service for all 96, 384 and 1536 well microplates. In an automated production process, labels imprinted with barcodes are mounted on the outside rims of the microplates. The type of barcode used, the barcode sequence, the labelling as well as the position of the barcode are all specified by the customer. The barcode labels used are temperature-resistant (-70 °C to +50 °C). The label and the barcode imprint are smear-resistant and stable to numerous solvents.



F073015  
Ordering form for  
barcoded microplates

## 5.2 BARCODE ORDERING PROCEDURE

The complete and detailed filling out of our barcode order form is the basis for the error-free and fast barcode service which we wish to provide to our customers.



Microplates with linear barcode

1

### ORDER FORM

You will find the barcode order form on our homepage in the download center (F073015) or you may contact your sales representative at Greiner Bio-One for a printed copy.

2

### SIGNATURE

After completely filling out the form, please verify the correctness of all your information with your signature.

3

### INTERNAL CHECK

Having received the completely filled out and signed barcode order form, Greiner Bio-One will check the feasibility of the requested barcode. A customer-specific item number is assigned to the order and communicated to you by your sales representative at Greiner Bio-One, along with an expected delivery date.

4

### SAMPLE PLATES

If desired and in consultation with your representative at Greiner Bio-One, prototype specimen plates with barcode can first be produced as free samples.

5

### REORDERING

Please indicate the desired numbering sequence begin and the desired sequence end on your order. Only written orders can be accepted. If you have altered the general barcode requirements for your plates in the reorders (e.g. a different barcode type, a different labelling), we request that you fill out a new barcode order form.

## PRODUCT OVERVIEW

### ADHERENT CELL CULTURE

#### CELLSTAR® TC

##### 6 / 12 / 24 / 48 Well

Raw material: PS, Well profile: F-bottom / Chimney Well, Surface treatment: TC

Item No.	Well format	Product colour	Bottom	Lid	Sterile	Qty. inner / outer
657160	6	○ clear	solid	+	+	1 / 100
665180	12	○ clear	solid	+	+	1 / 100
662160	24	○ clear	solid	+	+	1 / 100
677180	48	○ clear	solid	+	+	1 / 100

#### CELLSTAR® TC

##### 96 Well

Raw material: PS, Surface treatment: TC

Item No.	Well format	Product colour	F/C	Well profile			Bottom	Lid	Sterile	Qty. inner / outer
				U	V	HA				
655160	96	○ clear	+				solid	+	1 / 100	
655162	96	○ clear	+				solid	+	5 / 100	
655180	96	○ clear	+				solid	+	1 / 100	
655182	96	○ clear	+				solid	+	10 / 160	
650160	96	○ clear		+			solid	+	1 / 100	
650180	96	○ clear		+			solid	+	1 / 100	
651160	96	○ clear			+		solid	+	1 / 100	
651180	96	○ clear			+		solid	+	1 / 100	
675180	96	○ clear				+	solid	+	8 / 32	
655079	96	● black	+				solid	+	10 / 40	
655086	96	● black	+				solid	+	8 / 32	
655087	96	● black	+				µClear®	+	10 / 40	
655090	96	● black	+				µClear®	+	8 / 32	
675086	96	● black				+	solid	+	8 / 32	
675090	96	● black				+	µClear®	+	8 / 32	
655073	96	○ white	+				solid	+	10 / 40	
655083	96	○ white	+				solid	+	8 / 32	
655088	96	○ white	+				µClear®	+	10 / 40	
655098	96	○ white	+				µClear®	+	8 / 32	
675083	96	○ white				+	solid	+	8 / 32	

+\* Lid with condensation rings  
Well profile: for details see p. 39



**CELLSTAR® TC****384 Well**

Raw material: PS, Surface treatment: TC

Item No.	Well format	Product colour	Well profile		Bottom	Lid	Sterile	Qty. inner / outer
			F	SV HiBase				
781165	384	○ clear	+		solid		+	10 / 40
781182	384	○ clear	+		solid	+	+	8 / 32
781079	384	● black	+		solid		+	10 / 40
781086	384	● black	+		solid	+	+	8 / 32
781092	384	● black	+		µClear®		+	10 / 40
781091	384	● black	+		µClear®	+	+	8 / 32
781090	384	● black	+		µClear®	+	+	20 / 120
784086	384	● black		+	solid	+	+	8 / 32
781073	384	○ white	+		solid		+	10 / 40
781080	384	○ white	+		solid	+	+	8 / 32
781093	384	○ white	+		µClear®		+	10 / 40
781098	384	○ white	+		µClear®	+	+	8 / 32
784080	384	○ white		+	solid	+	+	8 / 32

**CELLSTAR® TC****1536 Well**

Raw material: PS, Well profile: F-bottom HiBase, Surface treatment: TC

Item No.	Well format	Product colour	Bottom	Lid	Sterile	Qty. inner / outer
782180	1536	○ clear	solid	+	+	1 / 32
782078	1536	● black	solid		+	15 / 60
782086	1536	● black	solid	+	+	10 / 40
782092	1536	● black	µClear®		+	15 / 60
782073	1536	○ white	solid		+	15 / 60
782080	1536	○ white	solid	+	+	10 / 40
782093	1536	○ white	µClear®		+	15 / 60

## PRODUCT OVERVIEW

### ADHERENT CELL CULTURE

#### CELLCOAT® Protein Coating

##### 6 / 24 / 96 Well

Raw material: PS, Well profile: F-bottom / Chimney Well, Surface treatment: CELLCOAT®

Item No.	Well format	Product colour	Bottom	Protein coating			Lid	Qty. inner / outer
				PDL	PLL	Coll. I		
657940	6	○ clear	solid	+			+*	5 / 50
657930	6	○ clear	solid		+		+*	5 / 50
657950	6	○ clear	solid			+	+*	5 / 50
662940	24	○ clear	solid	+			+*	5 / 50
662930	24	○ clear	solid		+		+*	5 / 50
662950	24	○ clear	solid			+	+*	5 / 50
655940	96	○ clear	solid	+			+*	5 / 20
655930	96	○ clear	solid		+		+*	5 / 20
655950	96	○ clear	solid			+	+*	5 / 20
655946	96	● black	μClear®	+			+*	5 / 20
655948	96	● black	μClear®	+			+*	20 / 120
655936	96	● black	μClear®		+		+*	5 / 20
655956	96	● black	μClear®			+	+*	5 / 20
655944	96	○ white	μClear®	+			+*	5 / 20

#### CELLCOAT® Protein Coating

##### 384 / 1536 Well

Raw material: PS, Surface treatment: CELLCOAT®

Item No.	Well format	Product colour	Well profile			Bottom	Protein coating			Lid	Qty. inner / outer
			F	SV HiBase	F HiBase		PDL	PLL	Coll I		
781940	384	○ clear	+			solid	+			+	5 / 20
781930	384	○ clear	+			solid		+		+	5 / 20
781950	384	○ clear	+			solid			+	+	5 / 20
781946	384	● black	+			μClear®	+			+	5 / 20
781948	384	● black	+			μClear®	+			+	20 / 120
781936	384	● black	+			μClear®		+		+	5 / 20
781956	384	● black	+			μClear®			+	+	5 / 20
784946	384	● black		+		solid	+			+	5 / 20
781945	384	○ white	+			solid	+			+	5 / 20
781944	384	○ white	+			μClear®	+			+	5 / 20
782946	1536	● black			+	μClear®	+			+	5 / 20

+\* Lid with condensation rings

Protein coatings: PDL = Poly-D-Lysine; PLL = Poly-L-Lysine; Coll. I = Collagen Type I

Well profile: for details see p. 39

**Advanced TC**

Raw material: PS, Surface treatment: Advanced TC

Item No.	Well format	Product colour	Well profile			Bottom	Lid	Sterile	Qty. inner / outer
			F/C	HA	F				
657960	6	○ clear	+			solid	+*	+	1 / 100
665980	12	○ clear	+			solid	+*	+	1 / 100
662960	24	○ clear	+			solid	+*	+	1 / 100
677980	48	○ clear	+			solid	+*	+	1 / 100
655980	96	○ clear	+			solid	+*	+	1 / 100
655982	96	○ clear	+			solid	+*	+	10 / 160
655986	96	● black	+			μClear®	+*	+	8 / 32
675986	96	● black		+		μClear®	+	+	8 / 32
655983	96	○ white	+			μClear®	+*	+	8 / 32
675983	96	○ white		+		μClear®	+	+	8 / 32
781986	384	● black			+	μClear®	+	+	8 / 32
781983	384	○ white			+	μClear®	+	+	8 / 32

## PRODUCT OVERVIEW

### NON-ADHERENT CELL CULTURE

#### CELLSTAR® Suspension Culture

Raw material: PS, Surface treatment: suspension

Item No.	Well format	Product colour	Well profile			Bottom	Lid	Sterile	Qty. inner / outer
			F/C	U					
657185	6	○ clear	+			solid	+*	+	1 / 100
665102	12	○ clear	+			solid	+*	+	1 / 100
662102	24	○ clear	+			solid	+*	+	1 / 100
677102	48	○ clear	+			solid	+*	+	1 / 100
655185	96	○ clear	+			solid	+*	+	1 / 60
650185	96	○ clear		+		solid	+	+	1 / 60

#### CELLSTAR® Cell-Repellent Surface

Raw material: PS, Surface treatment: cell-repellent

Item No.	Well format	Product colour	F	Well profile			Bottom	Lid	Sterile	Qty. inner / outer
				F/C	U	V				
657970	6	○ clear		+			solid	+*	+	1 / 5
665970	12	○ clear		+			solid	+*	+	1 / 5
662970	24	○ clear		+			solid	+*	+	1 / 5
677970	48	○ clear		+			solid	+*	+	1 / 5
655970	96	○ clear		+			solid	+*	+	1 / 6
650970	96	○ clear			+		solid	+*	+	1 / 6
650979	96	○ clear			+		solid	+*	+	8 / 32
651970	96	○ clear				+	solid	+*	+	1 / 6
655976	96	● black		+			µClear®	+*	+	8 / 32
655976-SIN	96	● black		+			µClear®	+*	+	1 / 32
781970	384	○ clear	+				solid	+	+	1 / 60
787979	384	○ clear			+		solid	+	+	8 / 32
781976	384	● black	+				µClear®	+	+	8 / 32
781976-SIN	384	● black	+				µClear®	+	+	1 / 32
781974	384	○ white	+				µClear®	+	+	8 / 32

+\* Lid with condensation rings  
Well profile: for details see p. 39

## SCREENING MICROPLATES

**Non-Treated Microplates (96 Well PS / PP)**

Surface treatment: untreated, Lid: no

Item No.	Well format	Raw material		Product colour	Well profile							Bottom	Sterile	Qty. inner / outer	
		PS	PP		F	F/C	U	U/C	V	V/C	HA				
655101	96	+		○ clear	+								solid		10 / 100
655161	96	+		○ clear	+								solid	+	2 / 100
650101	96	+		○ clear				+					solid		10 / 100
650161	96	+		○ clear				+					solid	+	2 / 100
651101	96	+		○ clear						+			solid		10 / 100
651161	96	+		○ clear						+			solid	+	2 / 100
675101	96	+		○ clear								+	solid		10 / 40
675161	96	+		○ clear								+	solid	+	10 / 40
655076	96	+		● black		+							solid		10 / 40
655096	96	+		● black		+							µClear®		10 / 40
675076	96	+		● black								+	solid		10 / 40
675096	96	+		● black								+	µClear®		10 / 40
655075	96	+		○ white		+							solid		10 / 40
655095	96	+		○ white		+							µClear®		10 / 40
675075	96	+		○ white								+	solid		10 / 40
655201	96		+	○ natural		+							solid		10 / 100
650201	96		+	○ natural					+				solid		10 / 100
650261	96		+	○ natural					+				solid	+	10 / 100
651201	96		+	○ natural							+		solid		10 / 100
655209	96		+	● black		+							solid		10 / 100
650209	96		+	● black					+				solid		10 / 100
651209	96		+	● black							+		solid		10 / 100

## PRODUCT OVERVIEW SCREENING MICROPLATES

### Non-Treated Microplates (384 Well PS / PP)

Surface treatment: untreated

Item No.	Well format	Raw material		Product colour	Well profile			Bottom	Lid	Sterile	Qty. inner / outer
		PS	PP		F	V	SV HiBase				
781101	384	+		○ clear	+			solid	no		10 / 100
781162	384	+		○ clear	+			solid	no	+	10 / 100
781185	384	+		○ clear	+			solid	yes	+	1 / 32
781186	384	+		○ clear	+			solid	yes	+	8 / 32
784101	384	+		○ clear			+	solid	no		10 / 40
781076	384	+		● black	+			solid	no		10 / 40
781096	384	+		● black	+			μClear®	no		10 / 40
784076	384	+		● black			+	solid	no		10 / 40
784076-25	384	+		● black			+	solid	no		25 / 150
781075	384	+		○ white	+			solid	no		10 / 40
781095	384	+		○ white	+			μClear®	no		10 / 40
784075	384	+		○ white			+	solid	no		10 / 40
784075-25	384	+		○ white			+	solid	no		25 / 150
781201	384		+	○ natural	+			solid	no		10 / 100
781280	384		+	○ natural			+	solid	no		10 / 100
781209	384		+	● black	+			solid	no		10 / 100

### Non-Treated Microplates (1536 Well PS / PP)

Surface treatment: untreated, Lid: no

Item No.	Well format	Raw material		Product colour	Well profile		Bottom	Sterile	Qty. inner / outer
		PS	PP		F HiBase	V Deep Well			
782101	1536	+		○ clear	+		solid		15 / 60
782076	1536	+		● black	+		solid		15 / 60
782096	1536	+		● black	+		μClear®		15 / 60
782075	1536	+		○ white	+		solid		15 / 60
782095	1536	+		○ white	+		μClear®		15 / 60
782270	1536		+	○ natural			solid		15 / 60
782261	1536		+	○ natural			solid	+	15 / 60

Well profile: for details see p. 39

**High-Binding Microplates (sterile)**

Raw material: PS, Surface treatment: high-binding, Lid: no

Item No.	Well format	Product colour	Well profile				Bottom	Sterile	Qty. inner / outer
			F	F/C	HA	F HiBase			
655077	96	● black		+			solid	+	10 / 40
655097	96	● black		+			µClear®	+	10 / 40
675077	96	● black			+		solid	+	10 / 40
655074	96	○ white		+			solid	+	10 / 40
655094	96	○ white		+			µClear®	+	10 / 40
675074	96	○ white			+		solid	+	10 / 40
781061	384	○ clear	+				solid	+	10 / 40
781077	384	● black	+				solid	+	10 / 40
781097	384	● black	+				µClear®	+	10 / 40
781074	384	○ white	+				solid	+	10 / 40
782061	1536	○ clear				+	solid	+	15 / 60
782077	1536	● black				+	solid	+	15 / 60
782097	1536	● black				+	µClear®	+	15 / 60
782074	1536	○ white				+	solid	+	15 / 60

## PRODUCT OVERVIEW SCREENING MICROPLATES

### Non-Binding Microplates (96 / 384 / 1536 Well)

Raw material: PS, Surface treatment: non-binding, Lid: no

Item No.	Well format	Product colour	Well profile						Bottom	Sterile	Qty. inner / outer
			F	F/C	U	V	SV HiBase	F HiBase			
655901	96	○ clear		+					solid		10 / 40
650901	96	○ clear			+				solid		10 / 40
651901	96	○ clear				+			solid		10 / 40
655900	96	● black		+					solid		10 / 40
655906	96	● black		+					µClear®		10 / 40
655904	96	○ white		+					solid		10 / 40
655903	96	○ white		+					µClear®		10 / 40
781901	384	○ clear	+						solid		10 / 40
781900	384	● black	+						solid		10 / 40
781906	384	● black	+						µClear®		10 / 40
784900	384	● black						+	solid		10 / 40
781904	384	○ white	+						solid		10 / 40
781903	384	○ white	+						µClear®		10 / 40
784904	384	○ white						+	solid		10 / 40
782900	1536	● black							+	solid	15 / 60
782904	1536	○ white							+	solid	15 / 60

### UV-Star® Microplates (96 / 384 Well)

Raw material: COC, Surface treatment: untreated, Lid: no

Item No.	Well format	Product colour	Well profile			Bottom	Sterile	Qty. inner / outer
			F	F/C	HA			
655801	96	○ clear		+		Cycloolefin film		10 / 40
675801	96	○ clear			+	Cycloolefin film		10 / 40
781801	384	○ clear	+			Cycloolefin film		10 / 40

Well profile: for details see p. 39



## IMMUNOLOGY MICROPLATES

### Standard ELISA-Microplates (medium- / high-binding)

Well format: 96, Raw material: PS, Bottom: solid, Lid: no

Item No.	Well format	Product colour	Well profile					Binding characteristic		Binding Brand name	Qty. inner / outer
			F	F/C	U	V	HA	med.	high		
655001	96	○ clear	+					+		MICROLON 200	10 / 40
655080	96	○ clear		+				+		MICROLON 200	10 / 40
650001	96	○ clear			+			+		MICROLON 200	10 / 40
651001	96	○ clear				+		+		MICROLON 200	10 / 40
675001	96	○ clear					+	+		MICROLON 200	10 / 40
655061	96	○ clear	+						+	MICROLON 600	10 / 40
655081	96	○ clear		+					+	MICROLON 600	10 / 40
650061	96	○ clear			+				+	MICROLON 600	10 / 40
651061	96	○ clear				+			+	MICROLON 600	10 / 40
675061	96	○ clear					+	+		MICROLON 600	10 / 40

### ELISA Strip Plates (medium- / high-binding)

Well format: 96, Raw material: PS, Bottom: solid, Lid: no

Item No.	Strip plate design		Product colour	Well profile		Binding characteristic		Binding Brand name	Qty. inner / outer
	6x18	12x8		F	U	med.	high		
756070	+		○ clear	+		+		MICROLON 200	10 / 100
756071	+		○ clear	+			+	MICROLON 600	10 / 100
754070	+		○ clear		+	+		MICROLON 200	10 / 100
754061	+		○ clear		+		+	MICROLON 600	10 / 100
762070		+	○ clear	+		+		MICROLON 200	10 / 100
762071		+	○ clear	+			+	MICROLON 600	10 / 100
767070		+	○ clear		+	+		MICROLON 200	10 / 100
767071		+	○ clear		+		+	MICROLON 600	10 / 100
762076		+	● black	+		+		FLUOTRAC 200	10 / 100
762077		+	● black	+			+	FLUOTRAC 600	10 / 100
762075		+	○ white	+		+		LUMITRAC 200	10 / 100
762074		+	○ white	+			+	LUMITRAC 600	10 / 100

## PRODUCT OVERVIEW

### IMMUNOLOGY MICROPLATES

#### Single-Break Strip Plates (medium- / high-binding)

Well format: 96, Well profile: C-bottom, Raw material: PS, Bottom: solid, Lid: no

Item No.	Strip plate design	Product colour	Colour coding well rim	Binding characteristic		Binding Brand name	Qty. inner / outer
				med.	high		
705070	12x8	○ clear		+		MICROLON 200	10 / 100
705063	12x8	○ clear	● red	+		MICROLON 200	10 / 100
705065	12x8	○ clear	● green	+		MICROLON 200	10 / 100
705066	12x8	○ clear	● yellow	+		MICROLON 200	10 / 100
705071	12x8	○ clear			+	MICROLON 600	10 / 100
705073	12x8	○ clear	● red		+	MICROLON 600	10 / 100
705074	12x8	○ clear	● blue		+	MICROLON 600	10 / 100
705075	12x8	○ clear	● green		+	MICROLON 600	10 / 100
705076	12x8	○ clear	● yellow		+	MICROLON 600	10 / 100

#### Streptavidin-Coated Microplates

Raw material: PS, Bottom: solid, Surface treatment: Streptavidin, Lid: no

Item No.	Well format	Product colour	Well profile		Qty. inner / outer
			C	F	
655990	96	○ clear	+		5 / 40
655997	96	● black	+		5 / 40
655995	96	○ white	+		5 / 40
781990	384	○ clear		+	5 / 40
781997	384	● black		+	5 / 40
781995	384	○ white		+	5 / 40

#### Covalent-Binding Microplates

Microplates with a covalent binding surface can be ordered on request. Please contact your sales representative for more information.

Well profile: for details see p. 39

## STORAGE PLATES

**Polypropylene Microplates (96 Well)**

Well format: 96, Raw material: PP, Bottom: solid, Lid: no

Item No.	Well format	Product colour	Well profile			Sterile	Qty. inner / outer
			F/C	U/C	V/C		
655201	96	○ natural	+				10 / 100
650201	96	○ natural		+			10 / 100
650261	96	○ natural		+		+	10 / 100
651201	96	○ natural			+		10 / 100
655209	96	● black	+				10 / 100
650209	96	● black		+			10 / 100
651209	96	● black			+		10 / 100

**Polypropylene Microplates (384 / 1536 Well)**

Raw material: PP, Bottom: solid, Lid: no

Item No.	Well format	Product colour	Well profile				Sterile	Qty. inner / outer
			F	V	V Deep Well	SV Deep Well		
781201	384	○ natural	+				10 / 100	
781280	384	○ natural		+			10 / 100	
781270	384	○ natural			+		6 / 60	
781271	384	○ natural			+	+	6 / 60	
784201	384	○ natural				+	10 / 100	
781209	384	● black	+				10 / 100	
782270	1536	○ natural			+		15 / 60	
782261	1536	○ natural			+	+	15 / 60	

## PRODUCT OVERVIEW

### STORAGE PLATES

#### Cycloolefin Microplates (for Acoustic Liquid Handling)

Raw material: cycloolefin, Bottom: solid, Sterile: no, Lid: no

Item No.	Well format	Raw material		Product colour	F	Well profile		Sterile	Qty. inner / outer
		PP	COC			F HiBase	SV HiBase		
781201-906	384	+		○ natural	+				10 / 100
793855	384		+	○ clear			+		15 / 60
782855	1536		+	○ clear		+			15 / 60
792870-906	1536		+	○ clear	+				15 / 60

#### Polypropylene MASTERBLOCK®

Raw material: PP, Bottom: solid, Lid: no

Item No.	Well format	Product colour	Well profile		Description	Sterile	Qty. inner / outer
			U	V			
786201	96	○ natural		+	0.5 ml		8 / 80
786261	96	○ natural		+	0.5 ml	+	1 / 80
780201	96	○ natural	+		1 ml		1 / 50
780215	96	○ natural	+		1 ml		5 / 50
780261	96	○ natural	+		1 ml	+	1 / 50
780270	96	○ natural		+	2 ml		1 / 50
780285	96	○ natural		+	2 ml		5 / 50
780271	96	○ natural		+	2 ml	+	1 / 50

Well profile: for details see p. 39

## MICROPLATES FOR MICROSCOPY

### Glass-Bottom Microplates

Raw material: PS, Bottom: glass, Lid: yes, Sterile: yes

Item No.	Well format	Product colour	Well profile			Surface treatment	Sterile	Qty. inner / outer
			F	F/C	F LoBase			
662892	24	● black		+		untreated	+	1 / 12
655892	96	● black		+		untreated	+	1 / 16
655891	96	● black		+		TC	+	1 / 16
655981	96	● black		+		Advanced TC	+	1 / 16
781892	384	● black	+			untreated	+	1 / 16
783892	1536	● black			+	untreated	+	1 / 16

### SCREENSTAR Microplates with Cycloolefin Film Bottom

Raw material: COP, Bottom: cycloolefin film, Surface treatment: TC, Sterile: yes

Item No.	Well format	Product colour	Well profile		Surface treatment	Lid	Sterile	Qty. inner / outer
			F/C	F				
655866	96	● black	+		TC	+	+	1 / 16
781866	384	● black		+	TC	+	+	8 / 32
789866	1536	● black		+	TC		+	17 / 68

### µClear® Film Bottom Microplates

Black and white µClear® microplates are available both non-treated and with a wide variety of surface properties and coatings well-suited for standard detection and microscopic applications.

## PRODUCT OVERVIEW

### LIDS / SEALERS / CAPMATS

#### Lids

Raw material: PS

Item No.	Height	Lid type	Condensation rings	Sterile	Qty. inner / outer
656101	9 mm	high			1 / 100
656161	9 mm	high		+	1 / 100
656170	9 mm	high	+		1 / 100
656171	9 mm	high	+	+	1 / 100
656190	6 mm	flat			20 / 200
656191	6 mm	flat		+	20 / 200
691101	4.8 mm	ultra low			5 / 100
691161	4.8 mm	ultra low		+	5 / 100

#### Sealers

Item No.	Description	Feature	Pierceable	Sterile	Qty. inner / outer
676001	EASYseal	clear			100 / 2,000
676090	SILVERseal	aluminium foil	+		100 / 1,200
676070	VIEWseal	clear			100 / 1,200
676040	AMPLIseal	clear			100 / 2,000
676050	BREATHseal	gas permeable			50 / 2,500
676051	BREATHseal	gas permeable		+	50 / 500

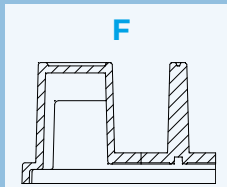
#### Cap Mats

Description: 96 Well CapMat, Pierceable: no, Raw material: EVA

Item No.	Nap shape	Sterile	Qty. inner / outer
381070	round		10 / 50
381061	round	+	1 / 50
381080	square		10 / 50
381081	square	+	1 / 50

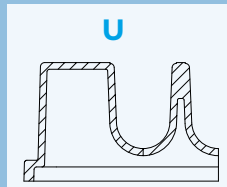
# WELL DESIGNS OF GREINER BIO-ONE MICROPLATES

## 96 WELL MICROPLATES



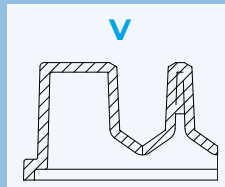
### F-Bottom

For precise optical measurements and microscopic applications (bottom reading)



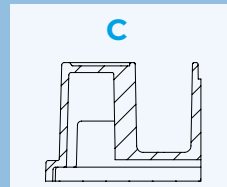
### U-Bottom

For easy and residue-free pipetting



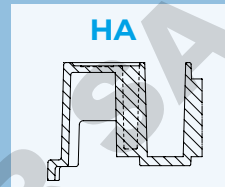
### V-Bottom

For precise pipetting and sample storage



### C-Bottom

Flat-bottom profile with rounded corners  
For residue-free pipetting and precise optical measurements



### Half Area

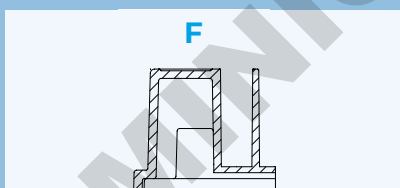
An alternative to the use of high-format microplates due to a reduction of the sample volume of up to 50 %



### Chimney Well

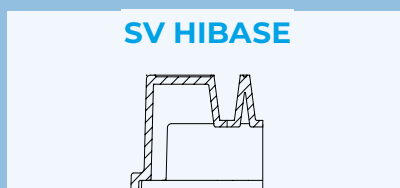
The standard microplate well has the same profile as the chimney well. The difference from the standard plate is the chimney-like arrangement of the wells. Each well stands on its own. Therefore the risk of sample carryover and cross contamination is minimised.

## 384 WELL MICROPLATES



### F-Bottom

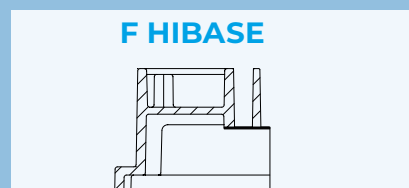
For precise optical measurements and microscopic applications (bottom reading)



### Small Volume HiBase

- / Top reading even at low working volumes
- / Savings in reagents similar to 1536 well
- / For transmission/fluorescence/luminescence applications
- / Excellent optical properties

## 1536 WELL MICROPLATES



### F-Bottom HiBase

- / For top reading even at low working volumes
- / For transmission/fluorescence/luminescence applications
- / Excellent optical properties

making a difference

[www.gbo.com](http://www.gbo.com)

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