

To achieve consistent, reproducible results when handling liquids in the laboratory, reliable dispensers and pipette tips are essential. With high quality materials and pipetting solutions, maximum precision can be achieved while reducing the consumption of reagents and time. Comfortable and fatigue-free working is also crucial for everyday laboratory life.

# LIQUID HANDLING

/	Sapphire Pipettes	150
	Single-Channel Pipettes	15
	Multi-Channel Pipettes	15
	Pipette Carrousel	152
	Pipette Carrousel	152
/	Sapphire Pipette Tips	153
	Pipette Tips 10 μl	154
	Pipette Tips 10 μl extended	15
	Filter Tips 20 µl	156
	Filter Tips 100 µl	156
	Pipette Tips 200 μl	15
	Pipette Tips 300 μl	158
	Pipette Tips 1000 µl	159
	Pipette Tips 1250 µl	160
	Racks (unfilled)	16
	Macro Pipette Tip 1-5 ml	16
/	CELLSTAR® Serological Pipettes	162
	Serological Pipettes	163
	Serological Pipettes Triple-packed	164
	Serological Pipettes Special Models	164
	MaxiPette	
	Pactaur / Sarum Pinattas	161





/ Watch our video:



# **SAPPHIRE** PIPETTES

Sapphire pipettes are a variable volume range of air-displacement pipettes designed and built to deliver optimal performance, ergonomics, and robustness in day-to-day use.

The lightweight design coupled with a state-of-the-art mechanism reduces pipetting forces and makes our pipettes both comfortable and easy-to-use. The contoured body shape allows for a relaxed grip whatever size your hand, and the 3-position tip ejector button makes

pipetting comfortable for both left-handed and right-handed users. The colour-coded push button allows for easier identification of the relevant tips. Sapphire pipettes provide an excellent performance within ISO 8655 which is considered the basis for determining the accuracy and precision of air-displacement pipettes. In combination with Sapphire pipette tips they show one of the lowest error tolerances on the market. All Sapphire pipettes are fully autoclavable.

- / Outstanding accuracy and precision
- Ergonomic design and minimal pipetting forces for a new level of comfort
- / Lightweight, robust and fully autoclavable
- / Digital volume setting
- / Colour-coded for tip identification



#### Single-Channel Pipettes

- / Light and comfortable design
- / Low pipetting forces for ease of use
- / Digital volume setting
- / Colour-coded for tip identification
- / 5 ml & 10 ml pipettes without ejector lever
- / Fully autoclavable

Description: single-channel pipette

Item no.	Colour code	Volume range	Qty. inner / outer
89000002	orange	0.2 - 2 µl	1/1
89000010	● red	1 - 10 μΙ	1/1
89000020	olight yellow	2 - 20 µl	1/1
89000100	opink pink	10 - 100 μΙ	1/1
89000200	yellow	20 - 200 µl	1/1
89001000	blue	100 - 1,000 µl	1/1
89000500	● violet	500 - 5,000 μl	1/1
89010000	○ light blue	1,000 - 10,000 μΙ	1/1

/ Spare parts and other accessories available on request



#### Multi-Channel Pipettes

- / Light and comfortable design
- / Low pipetting forces for ease of use
- / Digital volume setting
- Colour-coded for tip identification
- / Optimised for use with Greiner Bio-One tips
- Fully autoclavable

Item no.	Description	Colour code	Volume range	Qty. inner / outer
89000810	8-channel pipette	● red	0.5 - 10 μΙ	1/1
89000820	8-channel pipette	olight yellow	2 - 20 µI	1/1
89008200	8-channel pipette	yellow	20 - 200 µl	1/1
89008300	8-channel pipette	● green	20 - 300 µl	1/1

Item no.	Description	Colour code	Volume range	Qty. inner / outer
89001210	12-channel pipette	● red	0.5 - 10 μΙ	1/1
89001220	12-channel pipette	olight yellow	2 - 20 µl	1/1
89012200	12-channel pipette	yellow	20 - 200 μΙ	1/1
89012300	12-channel pipette	● green	20 - 300 µl	1/1

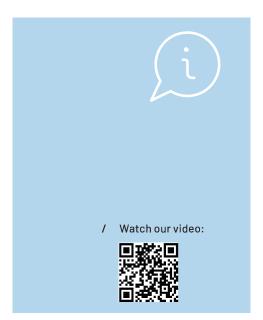
<sup>/</sup> Spare parts and other accessories available on request



## Pipette Carrousel

- / Holds up to 7 pipettes
- / Robust and space-saving
- / Holds single and multi-channel pipettes

Item no.	Qty. inner / outer
89000099	1/1





# SAPPHIRE PIPETTE TIPS

- Fully automated production and packaging
- / Universal fit for all common pipettes
- / Tips and racks are autoclavable
- / Coloured box inserts for easy volume identification
- / Low retention surface properties for high recovery rate and maximum precision

We understand that flexibility is critical in terms of modern liquid handling solutions. This is why the Sapphire tips are manufactured in eight different sizes in a volume range from 10 µl to 1250 µl, including an extended length 10 µl tip for the recovery of small sample volumes.

All our tips are made of medi-

cal grade polypropylene and are available as standard, low-retention, filter or low-retention filter tips.

Depending on the format, Sapphire pipette tips are packed in racks, bulk or refill units. Sapphire tips and pipettes when used together provide a fully optimised and harmonised liquid handling solution.



## Pipette Tips

## 10 µl

- / Universal fit for all common pipettes
- / Tips (without filter) and racks are autoclavable
- / Easy-to-read graduation
- / Colour-coded for tip identification















Raw material: PP, Volume range: 0.2 - 10 μl, Nominal volume: 10 μl, Matching rack: 770310

Item no.	Feature	Product colour	Box insert colour	Type of packaging	Sterile	Qty. inner / outer
771350	standard	○ natural	● red	bag		1,000 / 10,000
771351	standard	<ul><li>natural</li></ul>	● red	rack		960 / 5,760
771352	standard	○ natural	● red	rack	+	960 / 5,760
771354	standard	natural	● red	refill		960 / 4,800
771355	standard	○ natural	● red	refill	+	960 / 4,800
771361	low retention	natural	● red	rack		960 / 5,760
771362	low retention	○natural	● red	rack	+	960 / 5,760
771364	low retention	natural	● red	refill		960 / 4,800
771365	low retention	○natural	● red	refill	+	960 / 4,800
771353	filter	natural	● red	rack	+	960 / 5,760
771363	low retention filter	○natural	● red	rack	+	960 / 5,760



#### Pipette Tips 10 µl extended

- / Extended 10  $\mu$ l tip for better recovery of small sample volumes
- / Universal fit for all common pipettes
- / Tips (without filter) and racks are autoclavable
- / Easy-to-read graduation















Raw material: PP, Volume range: 0.1 - 10 μl, Nominal volume: 10 μl, Matching rack: 770310

Item no.	Feature	Product colour	Box insert colour	Type of packaging	Sterile	Qty. inner / outer
772350	standard	○ natural	● red	bag		1.000/5.000
772351	standard	onatural	● red	rack		960 / 5.760
772352	standard	○natural	● red	rack	+	960 / 5.760
772354	standard	onatural on the state of the st	● red	refill		960 / 4.800
772355	standard	○natural	● red	refill	+	960 / 4.800
772361	low retention	onatural on the state of the st	●red	rack		960 / 5.760
772362	low retention	○natural	● red	rack	+	960 / 5.760
772364	low retention	onatural	● red	refill		960 / 4.800
772365	low retention	○ natural	● red	refill	+	960 / 4.800
772353	filter	onatural on the state of the st	● red	rack	+	960 / 5.760
772363	low retention filter	○ natural	●red	rack	+	960 / 5.760





- / Prevent contamination with liquids and aerosols during pipetting
- / filters manufactured without additives
- / Easy-to-read graduation
- / Colour-coded for tip identification

















#### Raw material: PP, Volume range: 2 - 20 μl, Nominal volume: 20 μl, Type of packaging: rack

Item no.	Feature	Box insert colour	Sterile	Qty. inner / outer
773353	filter	orange	+	960 / 5,760
773363	low retention filter	orange	+	960 / 5,760





- 100 μι
- / Prevent contamination with liquids and aerosols during pipetting
- / filters manufactured without additives
- / Easy-to-read graduation
- / Colour-coded for tip identification

















#### Raw material: PP, Volume range: 5 – 100 μl, Nominal volume: 100 μl, Type of packaging: rack

Item no.	Feature	Box insert colour	Sterile	Oty. inner / outer
774353	filter	dark yellow	+	960 / 5,760
774363	low retention filter	dark yellow	+	960 / 5,760





- / Universal fit for all common pipettes
- / Tips (without filter) and racks are autoclavable
- / Easy-to-read graduation
- / Colour-coded for tip identification

















Raw material: PP, Volume range: 5 - 200 μl, Nominal volume: 200 μl, Matching rack: 770320

Item no.	Feature	Box insert colour	Type of packaging	Sterile	Qty. inner / outer
775350	standard	yellow	bag		1,000 / 15,000
775351	standard	yellow	rack		960 / 5,760
775352	standard	yellow	rack	+	960 / 5,760
775354	standard	yellow	refill		960 / 4,800
775355	standard	yellow	refill	+	960 / 4,800
775361	low retention	yellow	rack		960 / 5,760
775362	low retention	yellow	rack	+	960 / 5,760
775364	low retention	yellow	refill		960 / 4,800
775365	low retention	yellow	refill	+	960 / 4,800
775353	filter	yellow	rack	+	960 / 5,760
775363	low retention filter	yellow	rack	+	960 / 5,760



#### Pipette Tips 300 µl

- / Universal fit for all common pipettes
- / Tips (without filter) and racks are autoclavable
- / Easy-to-read graduation
- / Colour-coded for tip identification















Raw material: PP, Volume range: 10 - 300 μl, Nominal volume: 300 μl, Matching rack: 770330

Item no.	Feature	Box insert colour	Type of packaging	Sterile	Qty. inner / outer
776350	standard	● green	bag		1,000 / 10,000
776351	standard	● green	rack		960 / 5,760
776352	standard	● green	rack	+	960 / 5,760
776354	standard	● green	refill		960 / 4,800
776355	standard	● green	refill	+	960 / 4,800
776361	low retention	● green	rack		960 / 5,760
776362	low retention	● green	rack	+	960 / 5,760
776364	low retention	● green	refill		960 / 4,800
776365	low retention	● green	refill	+	960 / 4,800
776353	filter	● green	rack	+	960 / 5,760
776363	low retention filter	● green	rack	+	960 / 5,760



#### Pipette Tips 1000 µl

- / Universal fit for all common pipettes
- / Tips (without filter) and racks are autoclavable
- / Easy-to-read graduation
- / Colour-coded for tip identification















Raw material: PP, Volume range: 50 - 1.000 μl, Nominal volume: 1,000 μl, Matching rack: 770340

Item no.	Feature	Box insert colour	Type of packaging	Sterile	Qty. inner / outer
777350	standard	blue	bag		1,000 / 5,000
777351	standard	blue	rack		960 / 3,840
777352	standard	blue	rack	+	960 / 3,840
777354	standard	blue	refill		960 / 4,800
777355	standard	<ul><li>blue</li></ul>	refill	+	960 / 4,800
777361	low retention	blue	rack		960 / 3,840
777362	low retention	<ul><li>blue</li></ul>	rack	+	960 / 3,840
777364	low retention	blue	refill		960 / 4,800
777365	low retention	<ul><li>blue</li></ul>	refill	+	960 / 4,800



#### Pipette Tips 1250 µl

- / Universal fit for all common pipettes
- / Tips (without filter) and racks are autoclavable
- / Easy-to-read graduation
- / Colour-coded for tip identification















Raw material: PP, Volume range: 50 - 1.250 µl, Nominal volume: 1,250 µl, Matching rack: 770340

Item no.	Feature	Box insert colour	Type of packaging	Sterile	Oty. inner / outer
778350	standard	<ul><li>blue</li></ul>	bag		1,000 / 5,000
778351	standard	blue	rack		960 / 3,840
778352	standard	<ul><li>blue</li></ul>	rack	+	960 / 3,840
778354	standard	blue	refill		960 / 4,800
778355	standard	<ul><li>blue</li></ul>	refill	+	960 / 4,800
778361	low retention	blue	rack		960 / 3,840
778362	low retention	<ul><li>blue</li></ul>	rack	+	960 / 3,840
778364	low retention	<ul><li>blue</li></ul>	refill		960 / 4,800
778365	low retention	blue	refill	+	960 / 4,800
778353	filter	<ul><li>blue</li></ul>	rack	+	960 / 3,840
778363	low retention filter	<ul><li>blue</li></ul>	rack	+	960 / 3,840



## Racks (unfilled)

- / Highly transparent and stable
- / Can be autoclaved and reused up to 50 times
- / Stackable and automation-friendly
- Colour-coded rack inserts for quick volume identification





#### Macro Pipette Tip 1-5 ml

- / Volume range from 1 5 ml
- / Suitable for Gilson® P5000

Feature: Macro, Graduation: -, Volume range: 1 - 5 ml

Item no.	Product colour	0ty. inner / outer
745290	○ natural	250 / 2,500



/ Serological pipettes are also available triple-packed.



# CELLSTAR® SEROLOGICAL PIPETTES

- / Tip design guarantees a drop-free pipetting
- / Maximum accuracy
- / High optical clarity
- Clear, easily legible graduation
- / A coloured vertical Schellbach stripe on 1, 2, 5, 10 and 25 ml pipettes makes it considerably easier to read off the volume
- Colour code according to international standards

Greiner Bio-One offers a wide range of different serological pipettes and transfer pipettes.

The volume capacity of the serological pipettes is increased by a negative graduation. The pipettes are provided with colour codes according to international standards. The use of highgrade polystyrene guarantees maximum clarity. Expiry date and LOT number are printed on each single packaging unit. All pipettes are supplied with a filter for protection against the suction of liquid into the pipetting device.

CELLSTAR® serological pipettes are available in three different packaging options: in plastic bulk packs as well as individually wrapped in plastic or paper/plastic, both with peel-off function and additional breakthrough function.



#### Serological Pipettes

- / Sterile
- / Increased volume range with negative graduations
- / Lot number and expiry date on each bag
- / Filter for protection against suction of liquids into the pipetting device
- / Various packaging options

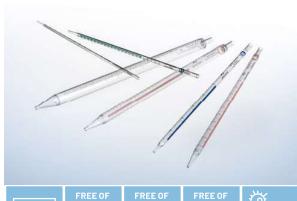
STERILE

FREE OF detectable DNase **FREE OF** detectable human DNA FREE OF detectable RNase cytotoxic



Raw material: PS

Item no.	Description	Graduation	Nominal volume	Packaging	Type of packaging	Sterile	Oty. inner / outer
604107	1 ml pipette	1/100	1 ml		bulk	+	25 / 1,000
604160	1 ml pipette	1/100	1 ml	plastic / plastic	single-packed	+	100 / 1,000
604181	1 ml pipette	1/100	1 ml	paper / plastic	single-packed	+	100 / 1,000
710107	2 ml pipette	1/100	2 ml		bulk	+	25 / 1,000
710160	2 ml pipette	1/100	2 ml	plastic / plastic	single-packed	+	100 / 1,000
710180	2 ml pipette	1/100	2 ml	paper / plastic	single-packed	+	100 / 1,000
606107	5 ml pipette	1/10	5 ml		bulk	+	25 / 500
606160	5 ml pipette	1/10	5 ml	plastic / plastic	single-packed	+	50 / 200
606180	5 ml pipette	1/10	5 ml	paper / plastic	single-packed	+	50 / 200
607107	10 ml pipette	1/10	10 ml		bulk	+	25 / 500
607160	10 ml pipette	1/10	10 ml	plastic / plastic	single-packed	+	50 / 200
607180	10 ml pipette	1/10	10 ml	paper / plastic	single-packed	+	50 / 200
760107	25 ml pipette	2/10	25 ml		bulk	+	25 / 200
760160	25 ml pipette	2/10	25 ml	plastic / plastic	single-packed	+	50 / 200
760180	25 ml pipette	2/10	25 ml	paper / plastic	single-packed	+	50 / 200
768160	50 ml pipette	1/2	50 ml	plastic / plastic	single-packed	+	20 / 100
768180	50 ml pipette	1/2	50 ml	paper / plastic	single-packed	+	20 / 100



## Serological Pipettes

#### Triple-packed

- / Sterile
- / Increased volume range with negative graduations
- / Lot number and expiry date on each bag
- / Filter for protection against suction of liquids into the pipetting device
- / Triple-packed



FREE OF detectable DNase FREE OF detectable human DNA

detectable RNase oytotoxi



Raw material: PS, Packaging: plastic / plastic, Triple-packed: yes

Item no.	Description	Graduation	Nominal volume	Sterile	Qty. inner / outer
604160-TRI	1 ml pipette	1/100	1 ml	+	10 / 100
710160-TRI	2 ml pipette	1/100	2 ml	+	10 / 100
606160-TRI	5 ml pipette	1/10	5 ml	+	10 / 100
607160-TRI	10 ml pipette	1/10	10 ml	+	10 / 100
760160-TRI	25 ml pipette	2/10	25 ml	+	10 / 100
768160-TRI	50 ml pipette	1/2	50 ml	+	10 / 100



#### Serological Pipettes

#### Special Models

- Short-format pipettes (shorties) permit back-saving work
- / 2 ml aspiration pipette without plug and graduation
- / Single-packed













Raw material: PS

Item no.	Description	Feature	Graduation	Nominal volume	Packaging	Sterile	Qty. inner / outer
710183	2 ml aspiration pipette	no plug	-	2 ml	paper / plastic	+	100 / 1,000
606190	5 ml pipette	shorty	1/10	5 ml	plastic / plastic	+	50/200
607190	10 ml pipette	shorty	2/10	10 ml	plastic / plastic	+	50/200



#### MaxiPette

- / Ergonomic design for easy pipetting
- / Variable speed control
- / Cordless and rechargeable
- / Up to eight hours of continuous operation
- / Compatible with Greiner Bio-One serological pipettes

Description: MaxiPette, Content kit: pipette controller charger benchtop stand extra filter replaceable lithium battery

Item no.	Oty. inner / outer
847070	1/1

/ Device with US or UK plug available on request

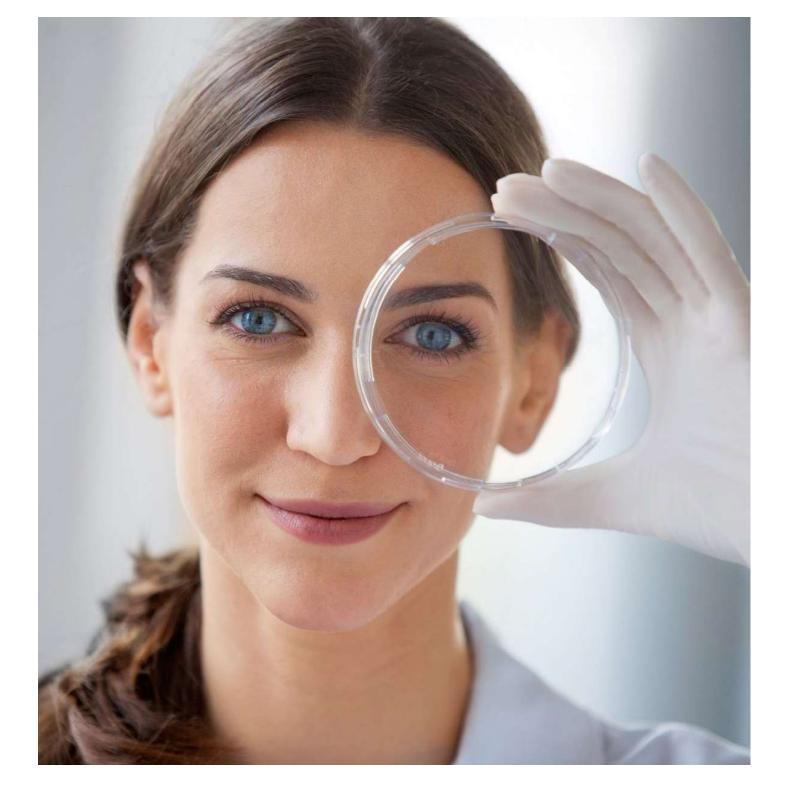


#### Pasteur / Serum Pipettes

- / Ideally suited for the rapid transfer of liquids
- / Sterile / non-sterile

Length: 153 mm

Item no.	Description	Graduation	Working volume	Sterile	Qty. inner / outer
700370	pasteur pipette	-	≤0,1 mI		500 / 1.500
700361	pasteur pipette	-	≤0,1 mI	+	25 / 1.000
612301	serum pipette	yes	≤2,5 ml		500 / 1.500
612361	serum pipette	yes	≤2,5 ml	+	1 / 800
612362	serum pipette	yes	≤2,5 ml	+	25 / 1.000



The study of microorganisms, their metabolism and their effects on other (macro-) organisms generally refers to the field of microbiology. The various detection methods are used in many research areas and in industry. For example, tests for the detection of microorganisms and for quality assurance are also applied in the production of pharmaceuticals, cosmetics, food and beverages.

## MICROBIOLOGY

/	Dishes / Plates / Others168
	Petri Dishes169
	Contact Dishes Divided Petri Dish169
	Macroplate / Square Petri Dish
	/ OneWell Plate170
	Swab Tube Cotton Swab170
	Disposable Inoculation Loops / Needles 17





/ For exact dimensions of our petri dishes, please refer to the product data sheets on our website.

## DISHES / PLATES / OTHERS

Greiner Bio-One offers petri dishes with diameters of 35, 60, 94, 100 and 145 mm. Manufactured from highly transparent polystyrene (PS), they are heat-resistant up to 60 °C for use with hot agar. Depending on the application vented and non-vented design can be selected. Besides the standard round design, a square-profile dish (120 mm x 120 mm x 17 mm) and the OneWell Plate in SBS format are available.

Furthermore, Greiner Bio-One offers contact dishes which are used with hygiene monitoring including detection of contaminations as well as testing the effectiveness of cleaning and disinfection on plane surfaces by means of contact cultures. The product range is completed by a special model with two compartments which enables parallel experiments with different samples or parameters in one dish.





## Petri Dishes

- / Available in different sizes
- / Easy stacking
- / With or without vents
- / Manufactured from crystal clear polystyrene

Item no.	Height	Ø nominal size	Vent nock	Qty. inner / outer
627102	10 mm	35 mm	yes	10 / 740
628102	15 mm	60 mm	yes	20 / 600
632180	16 mm	94 mm	no	20 / 480
633180	16 mm	94 mm	yes	20 / 480
664102	20 mm	100 mm	yes	15 / 360
639102	20 mm	145 mm	yes	15 / 120

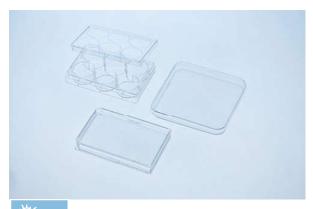


# Contact Dishes Divided Petri Dish

- / With or without vents
- / Manufactured from crystal clear polystyrene
- / Contact dish (sterile) with graduation to enable quick and easy analyses

Height: 15 mm

Item no.	Feature	Compartments	Ø nominal size	Total volume (well)	Vent nock	Sterile	Qty. inner / outer
629102			65 mm		no		20/600
629161	graduated		65 mm		no	+	20/600
629180	graduated		65 mm		yes	+	20/600
635102	2 compartments	2	94 mm	20 ml	yes		20 / 480



## Macroplate / Square Petri Dish /

## OneWell Plate

- / With vents
- / Manufactured from crystal clear polystyrene
- / Optimised space requirement compared to round dishes



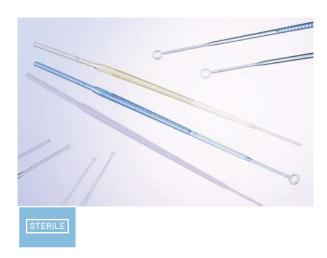
Item no.	Feature	Well format	Length	Width	Product colour	Total volume (well)	Lid	Vent nock	Qty. inner / outer
657102	microplate format	6	127.8 mm	85.5 mm	○ clear	16 ml	conden- sation rings		2 / 100
670102	microplate format	1	127.8 mm	85.5 mm	O clear	113.7 ml	yes	yes	8 / 32
688102	square		120 mm	120 mm	○ clear		yes	yes	10 / 240



#### Swab Tube Cotton Swab

- / Suitable for taking non-human bacteriological, serological or cytological samples in veterinary research
- / For hygienic controls in food industry as well as in environmental sampling

Item no.	Description	Feature	Height	Ø	Sterile	Qty. inner / outer
420161	Swab Tube	swab tube, polystyrol	110 mm	16 mm	+	1,300 / 1,300
420180	Swab Tube	swab tube, polystyrol	110 mm	16 mm	+	1 / 1,000
421161	Swab Tube	swab tube, polystyrol	152 mm	16 mm	+	- /1,000
421180	Swab Tube	swab tube, polystyrol	152 mm	16 mm	+	1/700
421084	Cotton Swab		145 mm		+	1 / 1,400

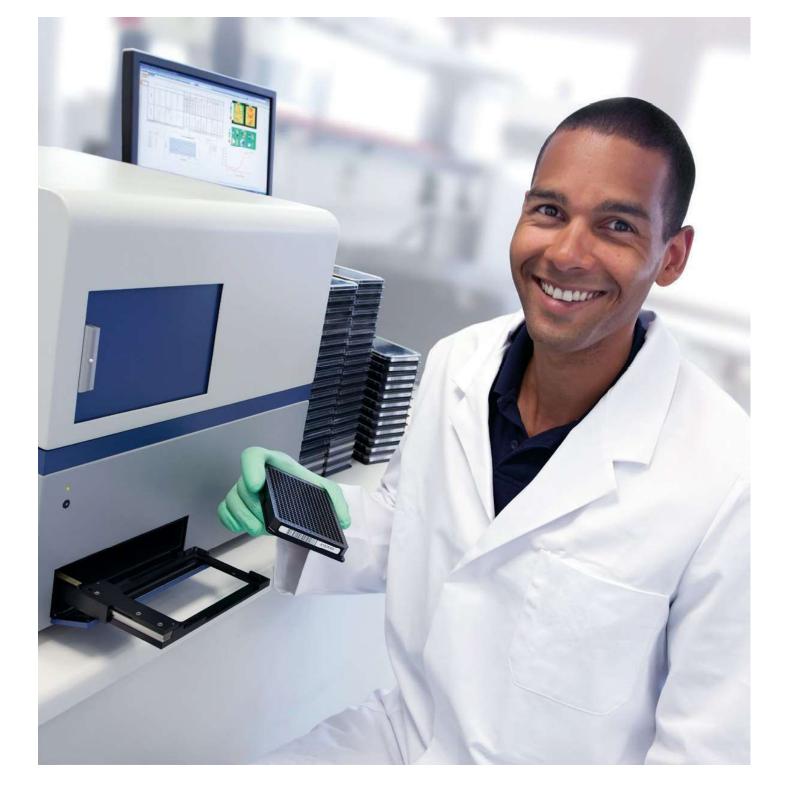


## Disposable Inoculation Loops / Needles

- / Needles ideal for picking single colonies
- / Flexible loops for easier collection and inoculation
- / Colour coding for volume differentiation

Length: 200 mm

Item no.	Description	Product colour	Volume	Sterile	Qty. inner / outer
731101	inoculation loop	○white	1 μΙ	+	50 / 2,000
731161	inoculation loop	○white	1 μΙ	+	1/600
731165	inoculation loop	○white	1 μΙ	+	10 / 3,000
731170	inoculation loop	blue	10 μΙ	+	50 / 2,000
731171	inoculation loop	blue	10 μΙ	+	1/600
731175	inoculation loop	blue	10 μΙ	+	10 / 3,000
731180	inoculation needle	yellow		+	50 / 2,000
731181	inoculation needle	yellow		+	1/600
731185	inoculation needle	yellow		+	1/3,000



Continued progress in research and related technologies, such as microscopy, imaging, detection and liquid handling, has given rise to a wide variety of platforms used in basic science, biotechnology and pharmaceutical drug development. Today, researchers can select application-specific microplates among a broad range of products that differ in format, design, base material, colour and surface properties.

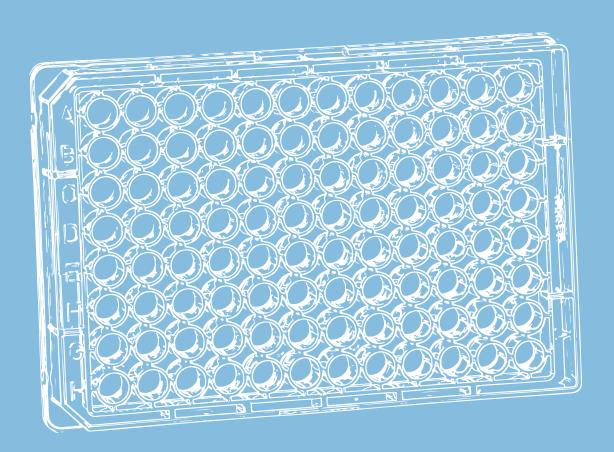
## HTS-MICROPLATES

/	96 Well Microplates1	78
	96 Well Microplates Polystyrene1	79
	96 Well Microplates Polystyrene - Half Area 1	80
	96 Well Microplates Polypropylene1	80
/	384 Well Microplates18	32
	384 Well Microplates Polystyrene 1 384 Well Microplates Polystyrene	83
	- Small Volume	84
	384 Well Microplates Polypropylene1	
/	1536 Well Microplates1	35
	1536 Well Microplates1	86
/	Polypropylene Storage Plates1	87
	96 Well MASTERBLOCK° Polypropylene 1	88
	96 Well Storage Box	88
	384 Deep Well MASTERBLOCK®  Polypropylene1	00
	1536 Deep Well Microplates Polypropylene 1	
/	Microplates for Compound Storage19	90
	Microplates for Compound Storage 384	
	and 1536 Well	191
/	Non-binding Microplates19	
	Non-binding Microplates 96 Well 1	
	Non-binding Microplates 384 and 1536 Well 1	93
/	Streptavidin-coated Microplates1	95
	Strentavidin-coated 96 and 384 Well 1	ar

/	UV-Star® Microplates	197
	UV-Star® Microplates	198
/	Lids / Sealers / CapMats	199
	Lids	200
	Sealers	20C
	CapMats	201
/	Protein Crystallisation Plates	202
	96 Well CrystalQuick	
	/ CrystalQuick Plus Plates	203
	24 Well ComboPlate CrystalBridge	
	/ Coverslips	203
	Terasaki Plates 60 and 72 Well	204

#### **MICROPLATES**

- / Comprehensive microplate portfolio
- / 96 / 384 / 1536 Well
- / High-quality materials for each application
- / Different well geometries
- / Various surface modifications



# HIGH-THROUGHPUT SCREENING MICROPLATES FROM GREINER BIO-ONE

Polypropylene (PP) and polystyrene (PS) are the standard materials used to manufacture the majority of microplates. Polystyrene is a highly clear polymer with excellent optical properties which makes it ideal for precise optical measurements. Polystyrene is also characterised by its ability to bind biomolecules, such as proteins, and it is therefore often used for manufacturing immunological products. Polystyrene is suitable for work with cell cultures.

Polypropylene is characterised by its excellent chemical

and thermal stability. It is the ideal polymer for storage vessels or microplates. In addition, Greiner Bio-One manufactures microplates with special requirement profiles, such as the UV-Star® or SCREENSTAR microplates made from different cycloolefins. They are characterised by their low level of autofluorescence, exceptionally high clarity, especially in the UV range, and greater chemical stability when compared with polystyrene.

## GREINER BIO-ONE MICROPLATES:

- / Manufactured under DIN ISO 9001 guidelines
- / Full traceability
- Footprint compatible with automated systems
- / Free of detectable endotoxins
- / Free of detectable DNase, RNase and human DNA
- / Available with barcode on request



OUR PORTFOLIO
OFFERS THE
RIGHT PLATFORM
AND COATING
FOR EVERY
APPLICATION

#### μClear® and UV-Star® Film Bottom Microplates

The development of a new and patented processing technique has made it possible for us to produce microplates with ultra-thin films, without the use of adhesives or solvents – the  $\mu$ Clear® and UV-Star® products. This special method eradicates the risk of leaking wells.

#### SensoPlate Glass Bottom Microplates

SensoPlate glass bottom microplates consist of a black pigmented polystyrene frame on to which a 175 µm thick borosilicate glass bottom is bonded. Thanks to the high optical quality of the glass bottom as well as the minimal bending, SensoPlate are

especially recommended for fluorescence correlation spectroscopy and sophisticated microscopic applications.

#### Black or White?

White microplates are usually used for luminescence measurements (e. g. Luciferase Reporter Assays) and black microplates for fluorescence. measurements (e.g. Green Fluorescence Protein). The critical properties in these methods, such as background, autofluorescence or crosstalk are considerably improved by the use of blackor white pigmented microplates.



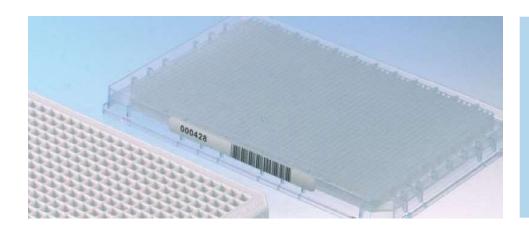
## Further information on microplates:

Forum No. 19: Base Material and Surface Modifications of Greiner Bio-One Multiwell Plates and Microplates - An Overview (F073793)

Microplate Selection Guide (F073048)

Microplate Dimensions Guide (F073027).





#### **BARCODE:**

You can download the microplate order form directly from our website www.gbo.com (Item no. F073010)

#### MICROLON, FLUOTRAC, LUMITRAC

These brands stand for the quality of our immunology products. MICROLON are clear microplates for transmission measurements. FLUOTRAC are black microplates for fluorescence measurements. LUMITRAC are white microplates for luminescence measurements.

#### Non-binding Surfaces

Non-binding surfaces are characterised by their low binding capacity for biomolecules such as DNA, RNA, peptides and proteins. The repellent property of the non-binding surfaces for biomoleculescan be advantageous in biochemical assays by increasing the sensitivity, reducing the background and improving the signal-to-noise ratio.

#### MICROLON, FLUOTRAC, LUMITRAC

Quality brands for immunological Plates:

#### MICROLON

clear microplates for transmission measurements

#### **FLUOTRAC**

black microplates for fluorescence measurements

#### LUMITRAC

white microplates for luminescence measurements

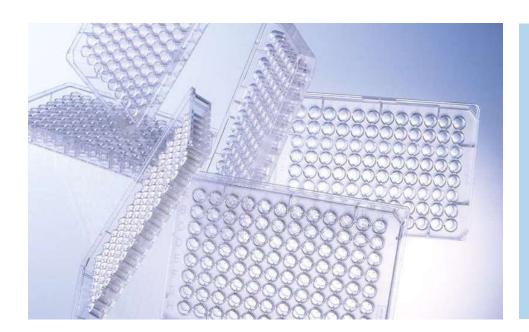
#### Non-binding surfaces

Low binding capacity for biomolecules such as DNA, RNA, peptides and proteins for sensitive biochemical assays

#### Cell Culture Surface

Significantly improves the adhesion of cells and the binding of proteins to the plastic surface

(see chapter cell culture)





/ For details regarding the different well profiles, please refer to the technical appendix.

## 96 WELL MICROPLATES

Since its introduction in the 1960's applications for the 96 well microplate have continually increased to the extent that it is impossible to envisage modern research and industry without it today. Greiner Bio-One has been manufacturing microplates and strip microplates for diagnostics

and immunological research for over 40 years. A large number of different 96 well microplates is available in a wide variety of surface treatments. The spectrum ranges from clear bottom microplates and completely black or white microplates to UV-Star® products.

- Available in polystyrene, polypropylene and cycloolefin
- / Clear / black / white
- / With U-bottom, V-bottom or F-bottom
- / Sterile / non-sterile
- Non-treated or in high-binding quality
- / In non-binding quality



## 96 Well Microplates

## Polystyrene

- / With U-bottom, V-bottom or F-bottom
- / Sterile / non-sterile
- / Non-treated or in high binding quality
- / With solid bottom or µClear® film bottom

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

Item no.	Well profile	Bottom	Binding character- isitc	Binding brand name	Surface treatment	Product colour	Working volume (well)	Sterile	Qty. inner/ outer
650101	U-bottom	solid			untreated	○ clear	40 μl - 280 μl		10 / 100
650161	U-bottom	solid			untreated	○ clear	40 μl - 280 μl	+	2 / 100
651101	V-bottom	solid			untreated	○ clear	40 μl - 200 μl		10 / 100
651161	V-bottom	solid			untreated	○ clear	40 μl - 200 μl	+	2 / 100
655101	F-bottom	solid			untreated	○ clear	25 μl - 340 μl		10 / 100
655161	F-bottom	solid			untreated	○ clear	25 μl - 340 μl	+	2 / 100
655075	F-bottom / Chimney Well	solid			untreated	○white	25 μl - 340 μl		10 / 40
655074	F-bottom / Chimney Well	solid	high-bind- ing	LUMITRAC 600		○white	25 μl - 340 μl	+	10 / 40
655077	F-bottom / Chimney Well	solid	high-bind- ing	FLUOTRAC 600		● black	25 μl - 340 μl	+	10 / 40
655076	F-bottom / Chimney Well	solid			untreated	● black	25 μl - 340 μl		10 / 40
655095	F-bottom / Chimney Well	µClear®			untreated	○white	25 μl - 340 μl		10 / 40
655094	F-bottom / Chimney Well	µClear®	high-bind- ing			○white	25 μl - 340 μl	+	10 / 40
655097	F-bottom / Chimney Well	µClear®	high-bind- ing			● black	25 μl - 340 μl	+	10 / 40
655096	F-bottom / Chimney Well	µClear®			untreated	● black	25 μl - 340 μl		10 / 40



## 96 Well Microplates

#### Polystyrene - Half Area

- / Sterile / non-sterile
- / Reduction of sample volume by up to 50 %
- / Standardised pathlength (1 cm=170 µl, 0.5 cm=80 µl)
- / Non-treated or in high-binding quality
- / With solid bottom or µClear® film bottom

Well format: 96, Well profile: F-bottom, Raw material: PS, Plate design: half area, Working volume (well): 15 µl - 175 µl, Lid: no

Item no.	Bottom	Binding characterisitc	Surface treatment	Product colour	Sterile	Qty. inner / outer
675161	solid		untreated	○clear	+	10 / 40
675101	solid		untreated	○ clear		10 / 40
675074	solid	high-binding		○white	+	10 / 40
675075	solid		untreated	○white		10 / 40
675077	solid	high-binding		● black	+	10 / 40
675076	solid		untreated	● black		10 / 40
675096	μClear®		untreated	● black		10 / 40

/ Further information on Half Area Microplates: Forum No. 16: 96 Well Half Area Microplates and their Application in Fluorescence, Luminescence and Transmission Measurements (F073121)



## 96 Well Microplates Polypropylene

- / Ideally suited for the storage of active agents, DNA/RNA or stock cultures
- / High chemical resistance and temperature tolerance
- / Black plates for fluorescence polarisation

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

Item no.	Well profile	Product colour	Working volume (well)	Sterile	Qty. inner / outer
650201	U-bottom / Chimney Well	○ natural	50 µl - 300 µl		10 / 100

Item no.	Well profile	Product colour	Working volume (well)	Sterile	Qty. inner / outer
650261	U-bottom / Chimney Well	<ul><li>natural</li></ul>	50 μΙ - 300 μΙ	+	10 / 100
650209	U-bottom / Chimney Well	● black	50 µl - 300 µl		10 / 100
655201	F-bottom / Chimney Well	onatural on the same of the sa	25 μΙ - 370 μΙ		10 / 100
655209	F-bottom / Chimney Well	● black	25 μΙ - 370 μΙ		10 / 100
651201	V-bottom/Chimney Well	onatural on the same of the sa	50 μΙ - 335 μΙ		10 / 100
651209	V-bottom/Chimney Well	● black	50 μΙ - 335 μΙ		10 / 100





/ For cell culture treated microplates, please refer to chapter cell culture

## 384 WELL MICROPLATES

# Drug screening has undergone rapid development over the past years.

The number of tests with new targets and the number of active agents to be tested is constantly increasing. Volume reduction, simple testing and cost savings are some of the highest priorities and high-format microplates with a low well volume are one of the most important tools in achieving this. One of the

first higher-format microplates was the 384 well plate, launched by Greiner Bio-One in 1994/1995. Compared with the 96 well microplate, the number of wells is quadrupled in this microplate, combined with a volume reduction from 382 µl to 131 µl. The well-to-well spacing is 4.5 mm (96 well plate: 9 mm). The external dimensions of the 384 well microplates are compatible with automated systems.

- Available in polystyrene, polypropylene and cycloolefin
- / Clear / black / white
- / With F-bottom, V-bottom or as Small Volume option
- / Solid bottom or µClear° film bottom
- Non-treated or in high-binding quality
- / In non-binding quality



# 384 Well Microplates Polystyrene

- / Solid bottom or  $\mu Clear^{\circ}$  film bottom
- / Sterile / non-sterile
- / Non-treated or in high-binding quality

Well format: 384, Well profile: F-bottom, Raw material: PS, Working volume (well): 15  $\mu$ l - 110  $\mu$ l

Item no.	Bottom	Binding characterisitc	Binding brand name	Surface treatment	Product colour	Lid	Sterile	Qty. inner / outer
781101	solid			untreated	○ clear	no		10 / 100
781061	solid	high-binding			○ clear	no	+	10 / 40
781162	solid			untreated	○ clear	no	+	10 / 100
781185	solid			untreated	○ clear	yes	+	1/32
781186	solid			untreated	○ clear	yes	+	8 / 32
781074	solid	high-binding	LUMITRAC 600		○ white	no	+	10 / 40
781075	solid			untreated	○white	no		10 / 40
781077	solid	high-binding	FLUOTRAC 600		<ul><li>black</li></ul>	no	+	10 / 40
781076	solid			untreated	● black	no		10 / 40
781095	µClear®			untreated	○ white	no		10 / 40
781097	µClear®	high-binding			● black	no	+	10 / 40
781096	µClear®			untreated	<ul><li>black</li></ul>	no		10 / 40



### 384 Well Microplates

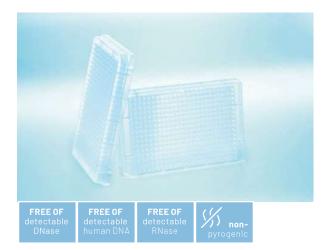
#### Polystyrene - Small Volume

#### HiBase

- / Perfect for top reading even at low working volumes
- / Savings in reagent similar to 1536 well microplates
- / Made of clear / black / white polystyrene for transmission, fluorescence or luminescence measurements

Well format: 384, Well profile: F-bottom, Bottom: solid, Raw material: PS, Surface treatment: untreated, Plate geometry: HiBase, Plate design: Small Volume, Working volume (well): 4 μl - 25 μl, Lid: no

Item no.	Product colour	Qty. inner / outer
784101	○ clear	10 / 40
784075	○ white	10 / 40
784075-25	○white	25 / 150
784076	● black	10 / 40
784076-25	● black	25 / 150



# 384 Well Microplates Polypropylene

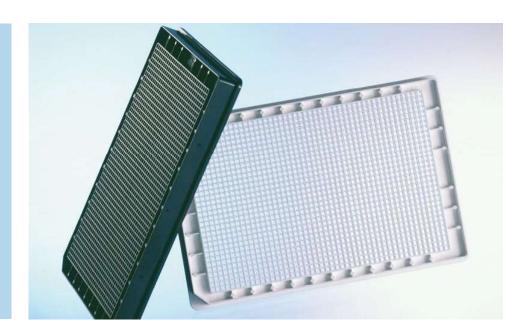
- / Ideally suited for the storage of active agents, DNA/RNA or stock cultures
- / High chemical resistance and temperature tolerance
- / Available natural or black
- / Item No. 781201-906 for Acoustic Liquid Handling

Well format: 384, Bottom: solid, Raw material: PP, Surface treatment: untreated, Lid: no

Item no.	Well profile	Product colour	Plate geometry	Plate design	Working volume (well)	Qty. inner / outer
781201	F-bottom	○ natural			15 µl - 145 µl	10 / 100
784201	V-bottom	onatural on the same of the sa	Deep Well	Small Volume	1 μΙ - 90 μΙ	10 / 100
781201-906	F-bottom	○natural			15 µl - 145 µl	10 / 100
781209	F-bottom	● black			15 μΙ - 145 μΙ	10 / 100
781280	V-bottom	○ natural			13 µl - 120 µl	10 / 100



/ For cell culture treated microplates, please refer to chapter cell culture



### **1536 WELL MICROPLATES**

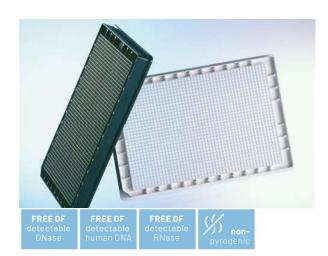
- / Available in polystyrene, polypropylene and cycloolefin
- / Clear / black / white
- / HiBase for top-reading applications
- / Solid bottom or µClear° film bottom
- / Sterile / non-sterile
- Non-treated or in high-binding quality

The highest possible degree of automation, optimal performance and cost savings continue to be the requirements placed on microplates for high-throughput screening.

In 1997, shortly after the launch of the 384 well microplates, Greiner Bio-One was the first manufacturer to introduce another innovative microplate format – the 1536 well microplate. The external dimensions were

the same as those used in the 96 well and 384 well microplates. However, to utilise the available space most efficiently, the number of wells was increased fourfold from 384 to 1536.

Close cooperation with numerous users has now led to the development of a broad product range, and the constant drive towards improvements in quality has, for example, led to a reduction in curvature of the plates to < 100 µm.



### 1536 Well Microplates

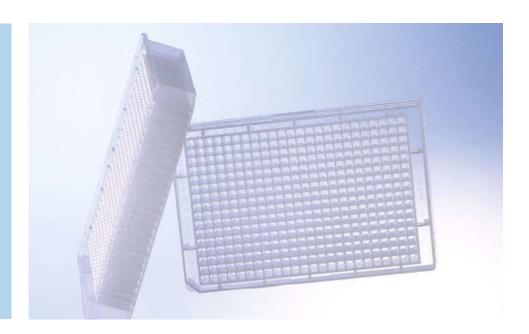
- / Solid bottom or µClear® film bottom
- / Sterile / non-sterile
- / Non-treated or in high-binding quality

Well format: 1536, Well profile: F-bottom, Raw material: PS, Plate geometry: HiBase, Working volume (well): 3  $\mu$ l - 10  $\mu$ l, Lid: no

Item no.	Bottom	Binding characterisitc	Binding brand name	Surface treatment	Product colour	Sterile	Qty. inner / outer
782101	solid			untreated	○ clear		15 / 60
782061	solid	high-binding	MICROLON 600		○ clear	+	15 / 60
782075	solid			untreated	○white		15 / 60
782074	solid	high-binding	LUMITRAC 600		○ white	+	15 / 60
782076	solid			untreated	● black		15 / 60
782077	solid	high-binding	FLUOTRAC 600		● black	+	15 / 60
782095	μClear®			untreated	○white		15 / 60
782097	μClear®	high-binding			● black	+	15 / 60
782096	µClear®			untreated	● black		15 / 60



/ Compound storage plates for acoustic liquid handling can also be found in this chapter.



### POLYPROPYLENE STORAGE PLATES

Greiner Bio-One polypropylene microplates are perfect storage plates for active agents, patient samples or biomolecules.

Their most important properties are biological inertness, resistance to numerous solvents commonly used in the laboratory, such as DMSO and high temperature resistance. The footprint

is compatible with automated systems.

The microplates are also characterised by elevated well walls which make it possible to easily seal them. The portfolio ranges from the 96 well MASTERBLOCK® with volumes of 0.5 ml, 1 ml or 2 ml over a MASTERBLOCK® with 384 wells or 1536 wells up to the 96 well storage box.

High chemical resistance and temperature tolerance



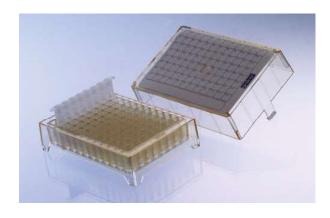
### 96 Well MASTERBLOCK®

### Polypropylene

- / Ideal for storing non-human sample material and cultivating bacteria / yeast
- / Uniform external dimensions and tolerances
- / Alphanumeric well coding
- / Sealable with adhesive films and heat sealers
- / Sealable with CapMats

Well format: 96, Bottom: solid, Raw material: PP

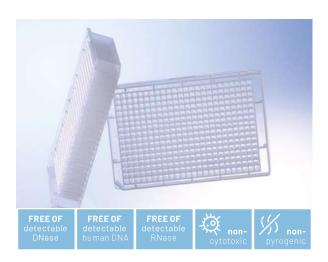
Item no.	Well profile	Product colour	Total volume (well)	Lid	Sterile	Qty. inner / outer
780201	U-bottom	○ natural	1 ml	CapMat 381070, 381061		1/50
780261	U-bottom	o natural	1 ml	CapMat 381070, 381061	+	1/50
780215	U-bottom	○ natural	1 ml	CapMat 381070, 381061		5/50
786201	V-bottom	o natural	0.5 ml	CapMat 381070, 381061		8 / 80
786261	V-bottom	○ natural	0.5 ml	CapMat 381070, 381061	+	1/80
780270	V-bottom	o natural	2 ml	CapMat 381080, 381081		1/50
780271	V-bottom	○ natural	2 ml	CapMat 381080, 381081	+	1/50
780285	V-bottom	o natural	2 ml	CapMat 381080, 381081		5/50



### 96 Well Storage Box

- / Storage box made of polycarbonate
- / With / without 96 polypropylene vessels
- / Coding card included
- / All components autoclavable

Item no.	Sterile	Oty. inner / outer
975502		1 / 120
975561	+	1/50
975570		1/50



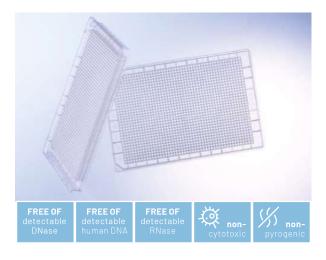
### 384 Deep Well MASTERBLOCK®

### Polypropylene

- / Ideal for compound libraries and applications with larger volumes
- / Conical well shape for precise pipetting
- / Alphanumeric well coding
- / Sealable with adhesive films and heat sealers

Well format: 384, Well profile: V-bottom, Bottom: solid, Raw material: PP, Plate geometry: Deep Well, Lid: no

Item no.	Product colour	Sterile	Qty. inner / outer
781270	○ natural		6 / 60
781271	onatural	+	6 / 60

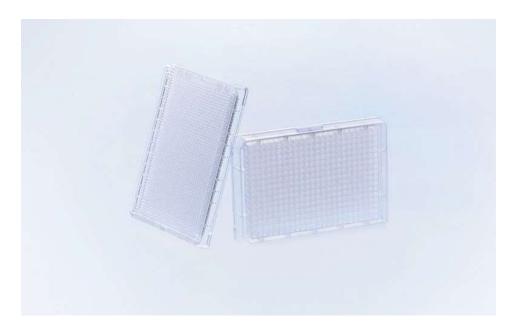


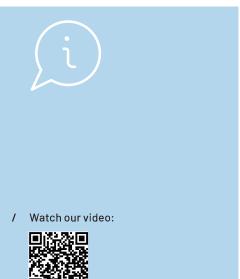
# 1536 Deep Well Microplates Polypropylene

- / Uniform external dimensions and tolerances
- / Total volume of 18 µl
- / Alphanumeric well coding
- / Sealable with adhesive films and heat sealers

Well format: 1536, Well profile: V-bottom, Bottom: solid, Raw material: PP, Plate geometry: Deep Well, Working volume: 3 µl - 15 µl, Lid: no

Item no.	Product colour	Sterile	Oty. inner / outer
782261	○ natural	+	15 / 60
782270	onatural on the same of the sa		15 / 60





### MICROPLATES FOR COMPOUND STORAGE

Polypropylene is still the material of choice for storage plates, but the material class of cycloolefins is becoming more routinely used because of its unsurpassed performance for a wide range of applications.

In compound storage, plates made from cycloolefins offer the

best combination of chemical resistance to polar solvents, like DMSO, and optical clarity. In addition, the dimensional stability and glass-like optical properties make this material ideally suited for plates in fully automated systems.

- / Suited for compound storage
- / Resistant against polar solvents
- / Excellent water and vapour barrier function
- / Almost no leachables
- Low biomolecule binding
- / Glass-like optical properties



# Microplates for Compound Storage 384 and 1536 Well

Microplates for Acoustic Liquid Handling

- / Stringent production specifications for a constant bottom quality
- / Microplates are deionised and packed in antistatic bags

Well profile: F-bottom, Bottom: solid, Lid: no

Item no.	Well format	Raw material	Surface treatment	Product colour	Plate geometry	Plate design	Working volume (well)	Qty. inner / outer
781201-906	384	PP	untreated	○natural			15 μΙ - 145 μΙ	10 / 100
793855	384	cycloolefin		○ clear	HiBase	Small Volume	1 μΙ - 25 μΙ	15 / 60
782855	1536	cycloolefin		⊖clear	HiBase		1 μΙ - 10 μΙ	15 / 60
792870-906	1536	cycloolefin		○ clear			1 μΙ - 14 μΙ	15 / 60





/ For more detailed information on well profiles and technical details please refer to our data sheets on our website: www.gbo.com

### NON-BINDING MICROPLATES

Polystyrene microplates with non-treated surfaces are commonly used for homogeneous biochemical HTS assays and demonstrate low and reproducible biomolecule binding.

However, even low amounts of biomolecular binding (e. g. DNA, RNA, proteins, peptides) can cause an undesirable increase in background, resulting in decreased signal-to-noise ratio. Greiner Bio-One's non-binding microplate surfaces prevent unwanted non-specific binding, especially advantageous for sensitive biochemical assays. Characterised by low protein, DNA, RNA and peptide binding properties the non-binding surfaces significantly increase assay sensitivity by reducing background and improving signal-to-noise ratio.

- / 96 / 384 / 1536 well format
- / Clear / black / white
- / Solid bottom or µClear° film bottom
- / Ultra low non-specific biomolecular binding properties
- / Long-term surface stability without degradation or leaching

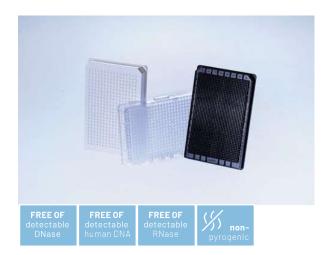


### Non-binding Microplates 96 Well

- / Clear / black / white
- / U-bottom, V-bottom or F-bottom/chimney well
- / Solid bottom or µClear® film bottom

Well format: 96, Raw material: PS, Binding characterisitc: Non-binding, Lid: no

Item no.	Well profile	Bottom	Product colour	Working volume (well)	Qty. inner / outer
650901	U-bottom	solid	○ clear	40 μΙ - 280 μΙ	10 / 40
651901	V-bottom	solid	○ clear	40 μΙ - 200 μΙ	10 / 40
655901	F-bottom / Chimney Well	solid	○ clear	25 μΙ - 340 μΙ	10 / 40
655904	F-bottom / Chimney Well	solid	○ white	25 μΙ - 340 μΙ	10 / 40
655900	F-bottom / Chimney Well	solid	● black	25 μΙ - 340 μΙ	10 / 40
655903	F-bottom / Chimney Well	μClear®	○ white	25 μΙ - 340 μΙ	10 / 40
655906	F-bottom / Chimney Well	µClear®	<ul><li>black</li></ul>	25 μΙ - 340 μΙ	10 / 40



# Non-binding Microplates 384 and 1536 Well

- / Clear / black / white
- / With F-bottom or as Small Volume option
- / Solid bottom or µClear® film bottom

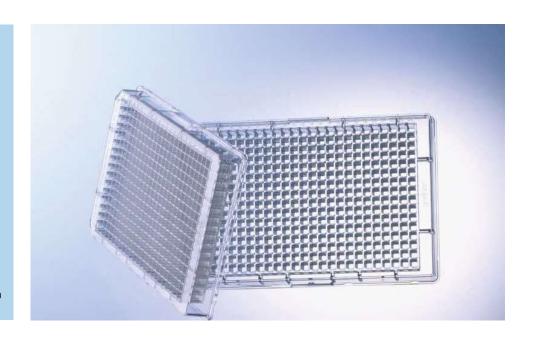
Well profile: F-bottom, Raw material: PS, Binding characterisitc: Non-binding, Lid: no

Item no.	Well format	Bottom	Product colour	Plate geometry	Plate design	Working volume (well)	Qty. inner / outer
781901	384	solid	○ clear			15 μΙ - 110 μΙ	10 / 40
781904	384	solid	○ white			15 μΙ - 110 μΙ	10 / 40
781900	384	solid	● black			15 μΙ - 110 μΙ	10 / 40
781903	384	µClear®	○ white			15 μΙ - 110 μΙ	10 / 40

Item no.	Well format	Bottom	Product colour	Plate geometry	Plate design	Working volume (well)	Qty. inner / outer
781906	384	µClear®	● black			15 μΙ - 110 μΙ	10 / 40
784904	384	solid	○ white	HiBase	Small Volume	4 µl - 25 µl	10 / 40
784900	384	solid	● black	HiBase	Small Volume	4 μΙ - 25 μΙ	10 / 40
782904	1536	solid	○ white	HiBase		3 μΙ - 10 μΙ	15 / 60
782900	1536	solid	● black	HiBase		3 μΙ - 10 μΙ	15 / 60



/ For more detailed information on well profiles and technical details please refer to our data sheets on our website: www.gbo.com



# STREPTAVIDIN-COATED MICROPLATES

Streptavidin-coated solid phases serve as reliable binding surfaces for all types of biotinylated molecules.

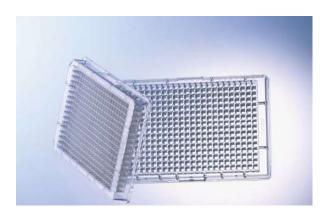
Numerous ligands can be biotinylated simply and due to the low molecular weight of biotin (244 Da) the functionality of the molecules is normally not impaired. Thus streptavidin-coated solid phases make it possible to rapidly isolate, determine and quantify components from a reaction mixture. By immobilising the bi-

otinylated substance, it is also possible to reproduce complete reaction chains on a streptavidin solid phase, e. g. enzyme immunoassays, enzyme activity assays, DNA hybridisation techniques and quantification of PCR products.

The high-purity streptavidin is bound to the plate surface in a uniform and stable layer. The coefficient of variation from well to well is under 5 % for 96 well microplates and under 8 % for 384 well microplates.

/ Available in 96 well and 384 well format

- / Clear / black / white
- 3-year shelf life at room temperature
- / All plates pre-blocked and ready-to-use



# Streptavidin-coated Microplates 96 and 384 Well

- / Long shelf life at room temperature
- / Lot number on each pack
- / Pre-blocked with BSA

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

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

<sup>/</sup> Further streptavidin-coated microplates are available on request.



/ Application Note: UV/ VIS Spectroscopy in Microplates UV-Star®, µClear®, MICROLON and CELLSTAR®



### UV-STAR® MICROPLATES

UV / VIS spectroscopy is a classical analytical method for determining the chemical constitution of a substance and its concentration in aqueous solution.

UV / VIS spectroscopy is usually conducted in quartz glass cuvettes. However, cuvettes do not provide sufficient throughput when dealing with large amounts of samples, and microplates can be used to speed up work.

Standard polystyrene microplates are only partially suitable for transmission measurements in the UV. Polystyrene absorbs UV especially in the short-wavelength range (< 320 nm). µClear® microplates with a thin polystyrene film base al-

ready have much lower back-ground values and can be used up to 340 nm without any problem. The adaptation of the patented µClear® process technology to a new, innovative UV-transparent material has made it possible to produce microplates that extend the transmission range up to 230 nm.

For the determination of nucleic acid and protein concentrations at 260 nm or 280 nm without background interference UV-Star® microplates are the ideal alternative to expensive and fragile quartz glass plates or cuvettes. UV-Star® plates are also DMSO-resistant and can be stored at -20 °C without any problem.

- / Available in 96 well and 384 well format
- With cycloolefin film bottom
- / Optical window down to 230 nm ideal for nucleic acid determinations at 260 nm/280 nm
- / For measurements of protein concentration at 280 nm



### UV-Star® Microplates

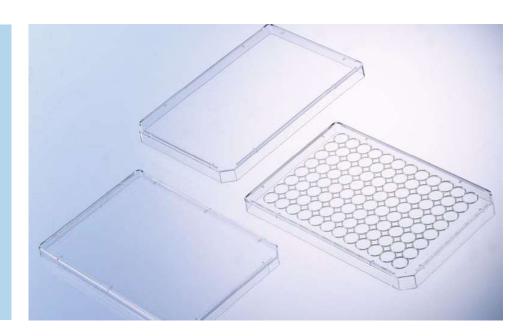
- / Available in 96 well and 384 well format
- / With cycloolefin film bottom
- / Optical window down to 230 nm ideal for nucleic acid determinations at 260 nm/280 nm
- / For measurements of protein concentration at 280 nm

Well profile: F-bottom, Bottom: Cycloolefin film, Raw material: COC, Surface treatment: untreated, Lid: no

Item no.	Well format	Product colour	Plate design	Working volume (well)	Qty. inner / outer
675801	96	○ clear	half area	15 μΙ - 175 μΙ	10 / 40
655801	96	○ clear		25 μΙ - 340 μΙ	10 / 40
781801	384	○ clear		15 μΙ - 110 μΙ	10 / 40



/ Forum No 6: Sealers for microplates and their areas of application in molecular biology and cell culture (F073013)



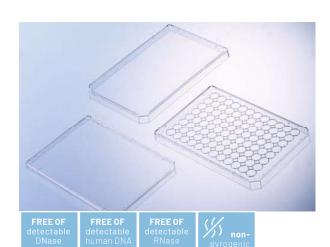
### LIDS / SEALERS / CAPMATS

- / Polystyrene lids in three different profile heights with and without condensation rings
- / Classical adhesive films coated with acrylate adhesive as well as advanced adhesive films with pressure-sensitive silicone adhesive
- / EVA CapMats for sealing of 96 well plates

Lids offer protection against contamination and evaporation during sample storage and cell cultivation.

In addition, Greiner Bio-One offers a full set of adhesive **sealers** for a wide range of routine and specialised applications, e.g. high-throughput screen-

ing, immunology, microbiology, molecular biology and PCR. An alternative method for sealing 96 well plates are CapMats. They are made of ethyl vinyl acetate (EVA), are resistant to DMSO and can be used in a temperature range between -20 °C and +60 °C. CapMats are not pierceable.



### Lids

All sterile lids are non-cytotoxic.

Description: Lid, Raw material: PS

Item no.	Height	Condensation rings	Lid type	Sterile	Qty. inner / outer
656101	9 mm	no	high		1 / 100
656161	9 mm	no	high	+	1/100
656170	9 mm	yes	high		1 / 100
656171	9 mm	yes	high	+	1 / 100
656190	6 mm	no	flat		20 / 200
656191	6 mm	no	flat	+	20 / 200
691101	4.8 mm	no	ultra low		25 / 100
691161	4.8 mm	no	ultra low	+	5/100



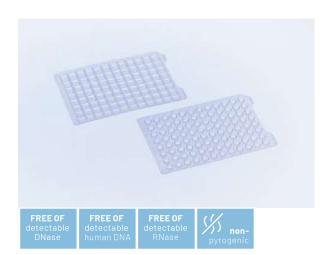
#### Sealers

The classical sealers such as EASYseal, AMPLIseal, SILVERseal and BREATHseal are coated with an acrylate adhesive. The advanced sealer VIEWseal is coated with a pressure-sensitive silicone adhesive.

Item no.	Description	Feature	Pierceable	Sterile	Oty. inner / outer
676001	EASYseal	clear			100 / 2,000
676090	SILVERseal	aluminium foil	yes		100 / 1,200
676070	VIEWseal	clear			100 / 1,200
676040	AMPLIseal	clear			100 / 2,000
676050	BREATHseal	gas-permeable			50 / 2.500

Item no.	Description	Feature	Pierceable	Sterile	Qty. inner / outer
676051	BREATHseal	gas-permeable		+	50 / 500

/ Forum No. 6: Sealers for microplates and their areas of application in molecular biology and cell culture (F073013)



### CapMats

- / Made of ethyl vinyl acetate (EVA)
- / Available for 96 well microplates and MASTER-BLOCK  $^{\circ}$
- / Sterile / non-sterile

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

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





/ Forum No. 7: Advanced high-throughput platforms for protein crystallisation (F073016)

### PROTEIN CRYSTALLISATION PLATES

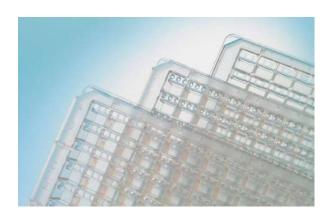
Detailed knowledge of interactions between the structure and function of biomolecules is fundamental for biological, medical and pharmaceutical research. A reliable method is the X-ray structure analysis of protein crystals.

In order to show three-dimensional molecular structures, the proteins must first be crystallised. Since every protein is different and a variety of factors influence protein crystallisation, the optimal conditions are usually tested with high-throughput technologies (pipetting robots).

Greiner Bio-One has specially developed microplates and accessories of the CrystalStar series to meet the requirements of high-throughput crystallisation in a short time and with relatively small amounts of protein. Techniques such as vapour diffusion (sitting drop, hanging drop) and microbatch under oil can be carried out effectively.

Plates with hydrophobic surface are particularly well suited for nanolitre crystallisation of membrane proteins. LBR (low birefringence) plates are specifically designed for the use of polarised light.

- / For vapour diffusion or microbatch under oil
- / Made of polystyrene or polyolefin (LBR plates)
- Footprint conforming to ANSI 1-2004 (except Terasaki plates)
- / Barcode labelling on request
- CrystalQuick plates with alphanumeric well coding



### 96 Well CrystalQuick / CrystalQuick Plus Plates

- / Crystallisation plates for sitting drop applications with different well profiles and material properties
- Optimised for sealing with VIEWseal or AMPLIseal
- Alphanumeric well coding

Item no.	Height	Material properties	Well profile	Plate design	Well/ reservoir	Well volume, max	Volume per reservoir	Qty. inner / outer
609171	8 mm	standard	flat	square(LP)	1	3.9 µl	140 μΙ	20/80
609180	8 mm	hydrophobic	flat	square(LP)	1	3.9 µl	140 μΙ	20/80
609871	8 mm	LBR	flat	square(LP)	1	3.9 µl	140 μΙ	20/80
609101	14.4 mm	standard	flat	square (SW)	3	4.1 µI	320 µI	10 / 40
609120	14.4 mm	standard	concave	round (RW)	3	1.9 μΙ	320 µI	10 / 40
609130	14.4 mm	hydrophobic	flat	square (SW)	3	4.1 µI	320 µI	10 / 40
609801	14.4 mm	LBR	flat	square (SW)	3	4.1 µI	320 µI	10 / 40
609820	14.4 mm	LBR	concave	round (RW)	3	1.9 μΙ	320 µI	10 / 40
609830	14.4 mm	LBR, hydropho- bic	flat	square(SW)	3	4.1 µI	320 µI	10 / 40



#### 24 Well ComboPlate

#### CrystalBridge / Coverslips

- Universal 24 well crystallisation plate with coverslips and CrystalBridge for sitting drop applications
- Siliconised coverslips available

Item no.	Description	Feature	Well format	Øwell	Bottom shape	Well volume, max	Lid	Qty. inner / outer
662150	ComboPlate		24	16.3 mm	flat	3,300 µI	yes	6 / 24
662145	CrystalBridge		1	4.6 mm	concave	45 µl	no	-/250
501870	round coverslips 18 mm	siliconised glass 0.19 - 0,22 mm						100 / 1,000

Item no.	Description	Feature	Well format	Ø well	Bottom shape	Well volume, max	Lid	Qty. inner / outer
503870	round coverslips 22 mm	siliconised glass 0.19 - 0,22 mm						100 / 1.000
503850	round coverslips 22 mm	siliconised glass 0.5 - 0,6 mm						100 / 1,000

/ Siliconised coverslips for Linbro plates (round, ø 22 mm) are available on request.



### Terasaki Plates 60 and 72 Well

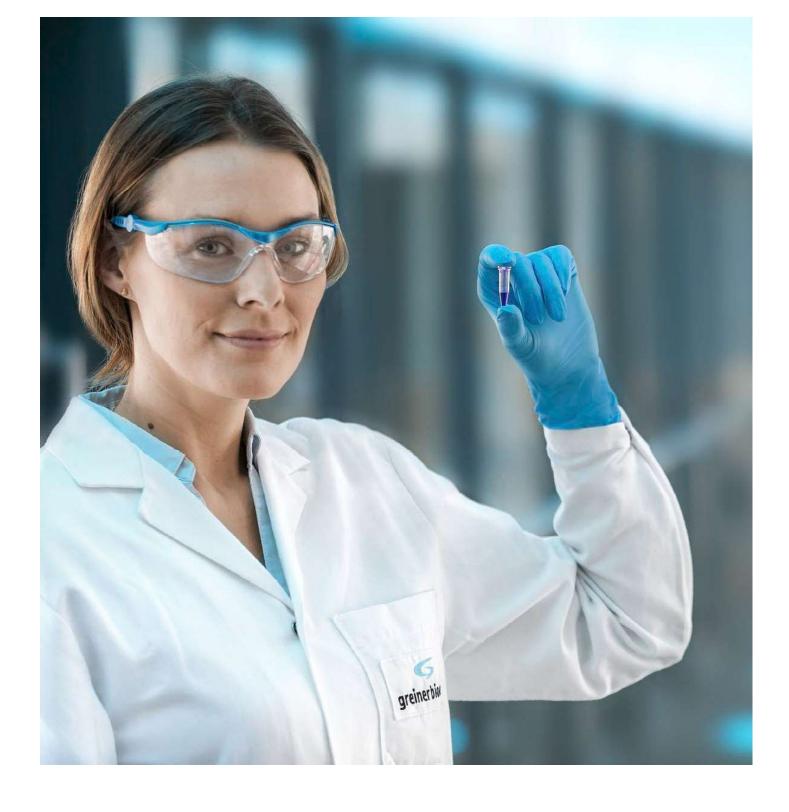
- / For microbatch under oil applications
- / Conical well geometry
- / Plate rim facilitates filling of all wells at the same time
- / With lid

Height: 83.3 mm, Length: 58 mm, Width: 10 mm, Ø well bottom: 1.3 mm, Well profile: flat, Well volume, max: 11.5 μl,
Working volume (well): ≤10 μl

Item no.	Well format	Qty. inner / outer
653102	60	10 / 580
654102	72	10 / 270

 $\emph{I} \quad \text{For Terasaki plates with TC treatment, please refer to chapter Immunology}.$ 

Protein Crystallisation Plates



For the handling and analysis of chemical and biological samples with small or medium volumes, Greiner Bio-One offers a wide range of different analyser cups and reaction vessels with corresponding closures and cuvettes.