

## THE BEST SCREW CAP FOR EVERY APPLICATION

The secured click-in ventilation position is reached, once the cap snaps in audibly. In addition, the correct position is indicated by a vertical tip of a triangle and the readable writing VENT. This allows visual verification of the aeration position, even when the flasks are stacked in the incubator. If the cap is turned clockwise to the end stop, the flask is closed gas-tight.

Filter screw caps for cell culture / suspension culture flasks, roller bottles and the CELLreactor have a patented hydrophobic capillary pore membrane. The defined and constant pore size of 0.2  $\mu\text{m}$  is achieved with minimal variation by means of a specially developed, high-technology method.

The filter insert provides both optimal protection against contamination and efficient gas exchange. By using PET / PTFE which are responsible for the mechanical strength and hydrophobic properties of the membrane, these advantages are retained even if the inside of the cap is briefly wetted with medium.



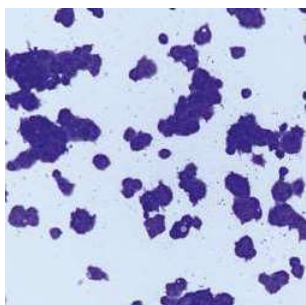


## HIGH-QUALITY RAW MATERIAL

Exclusively high-grade polystyrene and polyethylene terephthalate are used as raw materials for manufacturing our cell culture products.

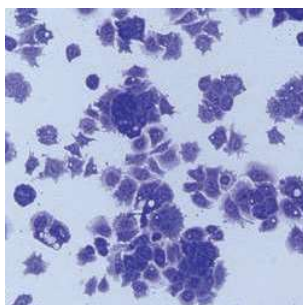
**Polystyrene (PS)** is characterised by its high clarity, which greatly simplifies the optical control of cell growth in polystyrene flasks, tubes and roller bottles.

**Polyethylene terephthalate (PET)** is used for manufacturing roller bottles, media bottles and membranes, due to its beneficial chemical, optical and mechanical properties.



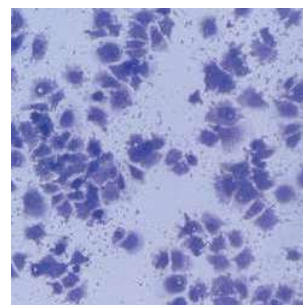
### CELLSTAR®

CELLSTAR® TC is the standard surface for cultivation of adherent cells. The special physical surface treatment leads to the incorporation of polar groups such as carboxyl and hydroxyl residues, which functionalised the hydrophobic polystyrene surface resulting in improved and consistent cell attachment.



### Advanced TC

The Advanced TC surface is based on polymer modification to result in a highly hydrophilic surface which positively influences cellular features and functions. Advanced TC facilitates consistent and homogenous cell attachment, increasing the overall cell yield and reducing cell loss.



### CELLCOAT®

The CELLCOAT® product line comprises cell culture vessels which are coated with biological or synthetic proteins of the extracellular matrix (Collagen Type I, Fibronectin, Laminin) or synthetic proteins (Poly-D-Lysine, Poly-L-Lysine).



/ This video shows how much fun you can have with our cell culture flasks in your lab:



## CELL CULTURE FLASKS

Greiner Bio-One offers standard and filter cap cell culture flasks with different surfaces. All Greiner Bio-One cell culture flasks are made of high-grade polystyrene and are free of detectable DNases, RNases, human DNA, endotoxins and are non-cytotoxic.

The specific design facilitates an optimal access of the flask with a cell scraper or pipette. The stacking rim on the top of the flasks ensures firm standing and easy stackability in the incubator. Both sides have a printed graduation for easier

filling. In addition to the filter screw cap Greiner Bio-One offers a standard screw cap with secured click-in ventilation position which guarantees the gas exchange within the flasks.

For the maintenance of adherent cells Greiner Bio-One offers a specific physical surface treatment which ensures adhesion and proliferation of these cells whereas the novel Advanced TC surface provides optimal conditions for the cultivation of sensitive and fastidious cells or the usage of restricted growth conditions.

- / Standard or filter screw cap
- / Canted neck
- / Sterile and user-friendly packaging
- / Growth area for adherent cells: 25, 75 and 175 cm<sup>2</sup>
- / Filling volume for suspension cells: 50, 250, 550, 650 ml



### CELLSTAR® Standard Cell Culture Flasks

For the maintenance of adherent cells Greiner Bio-One offers a specific physical surface treatment which ensures adhesion and proliferation of these cells.

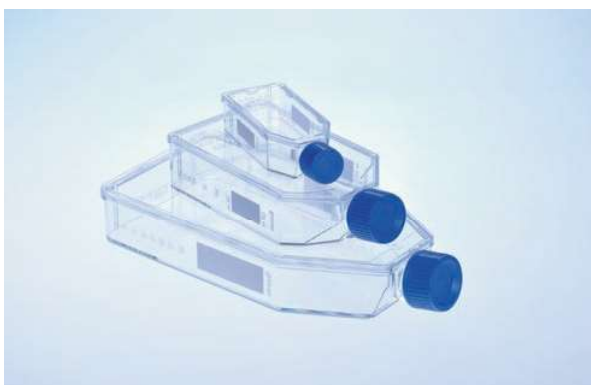
/ Item No. 690170 with measuring grid



Raw material: PS, Surface treatment: TC

Item no.	Flask design	Growth area	Cap colour	Working volume	Total volume	Cap design	Triple-packed	Sterile	Qty. inner / outer
690160		25 cm <sup>2</sup>	● red	5 ml - 10 ml	50 ml	screw cap		+	10 / 200
690170		25 cm <sup>2</sup>	● red	5 ml - 10 ml	50 ml	screw cap		+	10 / 200
690160-TRI		25 cm <sup>2</sup>	● red	5 ml - 10 ml	50 ml	screw cap	yes	+	10 / 130
690175		25 cm <sup>2</sup>	● red	5 ml - 10 ml	50 ml	filter screw cap		+	10 / 200
690175-TRI		25 cm <sup>2</sup>	● red	5 ml - 10 ml	50 ml	filter screw cap	yes	+	10 / 130
658170		75 cm <sup>2</sup>	● red	15 ml - 38 ml	250 ml	screw cap		+	5 / 120
658170-TRI		75 cm <sup>2</sup>	● red	15 ml - 38 ml	250 ml	screw cap	yes	+	5 / 90
658175		75 cm <sup>2</sup>	● red	15 ml - 38 ml	250 ml	filter screw cap		+	5 / 120
658175-TRI		75 cm <sup>2</sup>	● red	15 ml - 38 ml	250 ml	filter screw cap	yes	+	5 / 90
660160	flat	175 cm <sup>2</sup>	● red	20 ml - 45 ml	550 ml	screw cap		+	5 / 50
660160-TRI	flat	175 cm <sup>2</sup>	● red	20 ml - 45 ml	550 ml	screw cap	yes	+	5 / 40
660175	flat	175 cm <sup>2</sup>	● red	20 ml - 45 ml	550 ml	filter screw cap		+	5 / 50
660175-TRI	flat	175 cm <sup>2</sup>	● red	20 ml - 45 ml	550 ml	screw cap	yes	+	5 / 40
661160	high	175 cm <sup>2</sup>	● red	20 ml - 85 ml	650 ml	screw cap		+	4 / 40
661175	high	175 cm <sup>2</sup>	● red	20 ml - 85 ml	650 ml	filter screw cap		+	4 / 40

/ The item no. of triple-packed products is composed of the standard item no. plus -TRI (e.g. 604160-TRI). In general, all Greiner Bio-One cell culture products can be produced triple-packed. Please contact your Greiner Bio-One sales representative regarding customised triple-packed products.



### Cell Culture Flasks - Advanced TC

The Advanced TC surface provides optimal conditions for the cultivation of sensitive and fastidious cells or the usage of restricted growth conditions.

- / Consistent and even cell attachment
- / Homogeneous and optimised cell growth



Raw material: PS, Surface treatment: Advanced TC

Item no.	Flask design	Growth area	Cap colour	Working volume	Total volume	Cap design	Sterile	Qty. inner / outer
690960		25 cm <sup>2</sup>	● blue	5 ml - 10 ml	50 ml	screw cap	+	10 / 200
690975		25 cm <sup>2</sup>	● blue	5 ml - 10 ml	50 ml	filter screw cap	+	10 / 200
658970		75 cm <sup>2</sup>	● blue	15 ml - 38 ml	250 ml	screw cap	+	5 / 120
658975		75 cm <sup>2</sup>	● blue	15 ml - 38 ml	250 ml	filter screw cap	+	5 / 120
660960	flat	175 cm <sup>2</sup>	● blue	20 ml - 45 ml	550 ml	screw cap	+	5 / 50
660975	flat	175 cm <sup>2</sup>	● blue	20 ml - 45 ml	550 ml	filter screw cap	+	5 / 50

- / Forum No. 12: Advanced TC: An innovative surface improving cellular assays (F071104)
- / Application Report „Advanced TC for improving the cultivation / differentiation of embryonic stem cells“ (F076036)



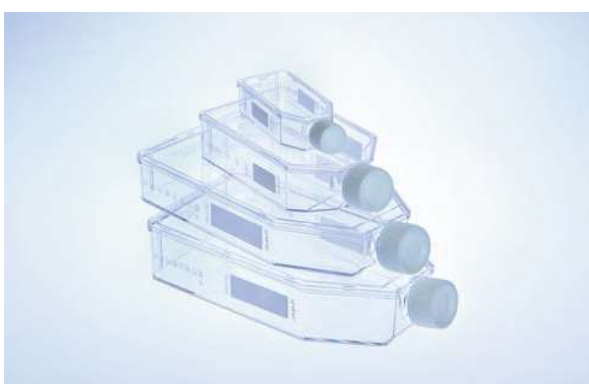
### Cell Culture Flasks - CELLCOAT®

- / Canted neck for optimal access
- / Graduation on both sides
- / Improved adhesion and cell proliferation
- / Reduced-serum or serum-free cultivation
- / Improved growth of primary cells

Raw material: PS, Surface treatment: CELLCOAT®, Cap design: filter screw cap

Item no.	Flask design	Growth area	Protein coating	Cap colour	Working volume	Total volume	Qty. inner / outer
690950		25 cm <sup>2</sup>	Collagen Type I	● red	5 ml - 10 ml	50 ml	10 / 50
658950		75 cm <sup>2</sup>	Collagen Type I	● red	15 ml - 38 ml	250 ml	5 / 50
661950	high	175 cm <sup>2</sup>	Collagen Type I	● red	20 ml - 85 ml	650 ml	5 / 40

Item no.	Flask design	Growth area	Protein coating	Cap colour	Working volume	Total volume	Qty. inner / outer
690940		25 cm <sup>2</sup>	Poly-D-Lysine	● red	5 ml - 10 ml	50 ml	10 / 50
658940		75 cm <sup>2</sup>	Poly-D-Lysine	● red	15 ml - 38 ml	250 ml	5 / 50
661940	high	175 cm <sup>2</sup>	Poly-D-Lysine	● red	20 ml - 85 ml	650 ml	5 / 40
690920		25 cm <sup>2</sup>	Fibronectin	● red	5 ml - 10 ml	50 ml	10 / 10
658920		75 cm <sup>2</sup>	Fibronectin	● red	15 ml - 38 ml	250 ml	10 / 10
661920	high	175 cm <sup>2</sup>	Fibronectin	● red	20 ml - 85 ml	650 ml	5 / 5
690910		25 cm <sup>2</sup>	Laminin	● red	5 ml - 10 ml	50 ml	10 / 10
658910		75 cm <sup>2</sup>	Laminin	● red	15 ml - 38 ml	250 ml	10 / 10
661910	high	175 cm <sup>2</sup>	Laminin	● red	20 ml - 85 ml	650 ml	5 / 5



### Suspension Culture Flasks

- / Hydrophobic surface, ideal for suspension cultures, hybridoma and embryonic stem cells
- / Graduation on both sides
- / Sterile and user-friendly packaging
- / Canted neck for optimal access

STERILE

FREE OF  
detectable  
DNase

FREE OF  
detectable  
human DNA

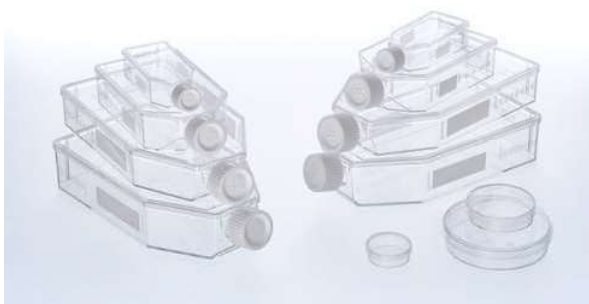
FREE OF  
detectable  
RNase

non-  
cytotoxic

non-  
pyrogenic

Raw material: PS, Surface treatment: suspension

Item no.	Flask design	Cap colour	Total volume	Cap design	Triple-packed	Sterile	Qty. inner / outer
690190		○ white	50 ml	screw cap		+	10 / 200
690190-TRI		○ white	50 ml	screw cap	yes	+	10 / 130
690195		○ white	50 ml	filter screw cap		+	10 / 200
690195-TRI		○ white	50 ml	filter screw cap	yes	+	10 / 130
658190		○ white	250 ml	screw cap		+	5 / 120
658190-TRI		○ white	250 ml	screw cap	yes	+	5 / 90
658195		○ white	250 ml	filter screw cap		+	5 / 120
658195-TRI		○ white	250 ml	filter screw cap	yes	+	5 / 90
660190	flat	○ white	550 ml	screw cap		+	5 / 50
660190-TRI	flat	○ white	550 ml	screw cap	yes	+	5 / 40
661190	high	○ white	650 ml	screw cap		+	4 / 40
661195	high	○ white	650 ml	filter screw cap		+	4 / 40
661195-TRI	high	○ white	650 ml	filter screw cap	yes	+	4 / 28



### Cell Culture Flasks

#### Cell-Repellent Surface

A cell-repellent surface reliably prevent cell attachment in suspension cultures of semi-adherent and adherent cell lines where standard hydrophobic surfaces generally used for suspension culture are insufficient.

Raw material: PS, Surface treatment: cell-repellent

Item no.	Flask design	Cap colour	Total volume	Cap design	Sterile	Qty. inner / outer
690980	flat	○ white	50 ml	screw cap	+	10 / 20
690985	flat	○ white	50 ml	filter screw cap	+	10 / 20
658980	flat	○ white	250 ml	screw cap	+	5 / 15
658985	flat	○ white	250 ml	filter screw cap	+	5 / 15
660980	flat	○ white	550 ml	screw cap	+	5 / 5
660985	flat	○ white	550 ml	filter screw cap	+	5 / 5
661980	high	○ white	650 ml	screw cap	+	4 / 4
661985	high	○ white	650 ml	filter screw cap	+	4 / 4



### AutoFlask - Cell Culture Flask

#### For Automated Systems

- / Standard microplate footprint
- / Compatible with a wide range of cell culture and liquid handling systems
- / Hydrophobic filter membrane
- / Different surface treatments
- / Customised barcoding on request

Flask design: AutoFlask, Growth area: 83.6 cm<sup>2</sup>, Raw material: PS, Total volume: 110 ml

Item no.	Barcode	Surface treatment	Product colour	Colour code	Working volume	Sterile	Qty. inner / outer
779160	yes	TC	○ clear	● red	20 ml - 40 ml	+	10 / 100
779190	yes	suspension	○ clear	○ white	60 ml - 80 ml	+	10 / 100

/ Further information on the AutoFlask: "Comparative cell growth study using the AutoFlask"(F072094)



STERILE

### Cell Scraper

- / For gentle mechanical removal of adherent cells
- / Optimised blade design for maximum cell harvest
- / Blade length: 1.8 cm
- / Pivot angle 60°
- / Sterile individual packaging

Description: Cell Scraper, Feature: blade length 1.8 cm

Item no.	Length	Sterile	Qty. inner / outer
541070	28 cm	+	50 / 100
541080	40 cm	+	100 / 100



STERILE

FREE OF  
detectable  
DNase

FREE OF  
detectable  
human DNA

FREE OF  
detectable  
RNase

 non-  
cytotoxic

 non-  
pyrogenic

### Media Bottles

- / Made of polyethylene terephthalate (PET)
- / Available in three sizes
- / With graduation
- / Triple-packed for GMP compliant workflow

Flask design: tetragonal, Raw material: PET, Cap design: screw cap

Item no.	Cap colour	Total volume	Sterile	Qty. inner / outer
950700	○ white	500 ml	+	50 / 50
951700	○ white	100 ml	+	25 / 100
952700	○ white	1,000 ml	+	24 / 24





### Disposal Bags

Disposal bags made of polypropylene for sterilisation in the steam autoclave. On request they are also available with imprint "Biohazard" if a sufficient number is ordered. For users of hot-air sterilisers, disposal bags made of polyamide are suitable for use up to +160 °C.

*Foil thickness: 0.05 mm*

Item no.	Length	Width	Nominal capacity	Suitable for steam autoclaves	Suitable for hot air sterilizers	Material	Qty. inner / outer
643201	500 mm	300 mm	10 l	yes		PP	500 / 500
643401	500 mm	300 mm	10 l		yes	PA	500 / 500
644201	780 mm	400 mm	30 l	yes		PP	500 / 500
644401	780 mm	400 mm	30 l		yes	PA	500 / 500
646201	780 mm	600 mm	65 l	yes		PP	500 / 500
646401	780 mm	600 mm	65 l		yes	PA	300 / 300
649201	1,100 mm	700 mm	130 l	yes		PP	350 / 350
649401	1,100 mm	700 mm	130 l		yes	PA	200 / 200



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



## CELLSTAR® CELL CULTURE DISHES

**Our CELLSTAR® cell culture dishes are manufactured to meet the highest quality standards at Greiner Bio-One.**

This assortment of dishes offers a range of growth sizes from 8.7 to 143 cm<sup>2</sup>. These dimensions are provided in nominal sizes of 35, 60, 100, and 145 mm. For culture dishes associated with growth areas of either 58 or 143 cm<sup>2</sup>, we supply variants with side heights of 20 mm (for special applications). In addition to our standard formats we offer 35 mm cell culture dishes that are equipped with four in-

ner rings. Our standard cell culture dishes have been treated in order to optimise growth and adhesion.

However, we are also capable of providing sterile cell culture trays without any type of coating for suspension culture. Similar to all of our cell culture laboratory products, this range of dishes is packed user-friendly within sterile conditions. This allows technicians to safely handle their samples with a wide variety of cell culture methods without the risk of cell culture contamination.

- / Easy stacking
- / Maximal transparency for excellent microscopic analysis
- / Improved cell adhesion through physical surface treatment



**Cell Culture Dishes**

- / Improved cell adhesion through physical surface treatment
- / Maximal transparency for excellent microscopic analysis
- / Sterile and user-friendly packaging
- / Easy stacking

STERILE	FREE OF detectable DNase	FREE OF detectable human DNA	FREE OF detectable RNase	non-cytotoxic	non-pyrogenic
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Surface treatment: TC, Vent neck: yes

Item no.	Compartment	Height	Ø nominal size	Growth area	Growth area / unit	Working volume	Total volume	Triple-packed	Sterile	Qty. inner / outer
627160		10 mm	35 mm	8.7 cm <sup>2</sup>		≥3 ml	10 ml		+	10 / 740
627170	4	10 mm	35 mm		0.93 cm <sup>2</sup>	≥0.08 ml	9 ml		+	10 / 740
628160		15 mm	60 mm	21 cm <sup>2</sup>		6 ml - 7 ml	28 ml		+	10 / 600
628160-TRI		15 mm	60 mm	21 cm <sup>2</sup>		6 ml - 7 ml	28 ml	yes	+	10 / 300
664160		20 mm	100 mm	58 cm <sup>2</sup>		16 ml - 17 ml	100 ml		+	15 / 360
664160-TRI		20 mm	100 mm	58 cm <sup>2</sup>		16 ml - 17 ml	100 ml	yes	+	15 / 180
639160		20 mm	145 mm	143 cm <sup>2</sup>		25 ml - 27 ml	240 ml		+	5 / 120
639160-TRI		20 mm	145 mm	143 cm <sup>2</sup>		25 ml - 27 ml	240 ml	yes	+	5 / 120

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



**Cell Culture Dishes - Advanced TC**

The Advanced TC surface provides optimal conditions for the cultivation of sensitive and fastidious cells or the usage of restricted growth conditions.

- / Consistent and even cell attachment
- / Homogeneous and optimised cell growth

STERILE	FREE OF detectable DNase	FREE OF detectable human DNA	FREE OF detectable RNase	non-cytotoxic	non-pyrogenic
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Surface treatment: Advanced TC, Vent neck: yes

Item no.	Height	Ø nominal size	Growth area	Working volume	Total volume	Sterile	Qty. inner / outer
627960	10 mm	35 mm	8.7 cm <sup>2</sup>	≤3 ml	10 ml	+	10 / 740
628960	15 mm	60 mm	21 cm <sup>2</sup>	6 ml - 7 ml	28 ml	+	10 / 600

Item no.	Height	Ø nominal size	Growth area	Working volume	Total volume	Sterile	Qty. inner / outer
664960	20 mm	100 mm	58 cm <sup>2</sup>	16 ml - 17 ml	100 ml	+	15 / 360
639960	20 mm	145 mm	143 cm <sup>2</sup>	25 ml - 27 ml	240 ml	+	5 / 120

/ Forum No. 12: Advanced TC: An innovative surface improving cellular assays (F071104)

/ Application Report „Advanced TC for improving the cultivation / differentiation of embryonic stem cells“ (F076036)



### Cell Culture Dishes - CELLCOAT®

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

Surface treatment: CELLCOAT®, Vent neck: yes

Item no.	Height	Ø nominal size	Growth area	Protein coating	Working volume	Total volume	Qty. inner / outer
628950	15 mm	60 mm	21 cm <sup>2</sup>	Collagen Type I	6 ml - 7 ml	28 ml	20 / 100
664950	20 mm	100 mm	58 cm <sup>2</sup>	Collagen Type I	16 ml - 17 ml	100 ml	10 / 40
628940	15 mm	60 mm	21 cm <sup>2</sup>	Poly-D-Lysine	6 ml - 7 ml	28 ml	20 / 100
664940	20 mm	100 mm	58 cm <sup>2</sup>	Poly-D-Lysine	16 ml - 17 ml	100 ml	10 / 40
628930	15 mm	60 mm	21 cm <sup>2</sup>	Poly-L-Lysine	6 ml - 7 ml	28 ml	20 / 100
628920	15 mm	60 mm	21 cm <sup>2</sup>	Fibronectin	6 ml - 7 ml	28 ml	5 / 20
664920	20 mm	100 mm	58 cm <sup>2</sup>	Fibronectin	16 ml - 17 ml	100 ml	5 / 10
628910	15 mm	60 mm	21 cm <sup>2</sup>	Laminin	6 ml - 7 ml	28 ml	5 / 20
664910	20 mm	100 mm	58 cm <sup>2</sup>	Laminin	16 ml - 17 ml	100 ml	10 / 10



**Cell Culture Dishes**

**Cell-Repellent Surface**

Cell culture vessels with cell-repellent surface reliably prevent cell attachment in suspension cultures of semi adherent / adherent cell lines where standard hydrophobic surfaces generally used for suspension culture are insufficient.

STERILE	FREE OF detectable DNase	FREE OF detectable human DNA	FREE OF detectable RNase	non-cytotoxic	non-pyrogenic
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Raw material: PS, Surface treatment: cell-repellent, Vent neck: yes

Item no.	Height	Ø nominal size	Working volume	Total volume	Sterile	Qty. inner / outer
627979	10 mm	35 mm	≤3 ml	10 ml	+	10 / 40
628979	15 mm	60 mm	6 ml - 7 ml	28 ml	+	10 / 20
664970	20 mm	100 mm	16 ml - 17 ml	100 ml	+	1 / 5



**CELLview Dish**

The CELLview cell culture dish combines the convenience of a standard size 35 mm disposable plastic cell culture dish with the optical quality of glass, providing superior high-resolution microscopic images of *in-vitro* cultivated cultures.

/ Embedded glass bottom for maximal planarity

STERILE	FREE OF detectable DNase	FREE OF detectable human DNA	FREE OF detectable RNase	non-cytotoxic	non-pyrogenic
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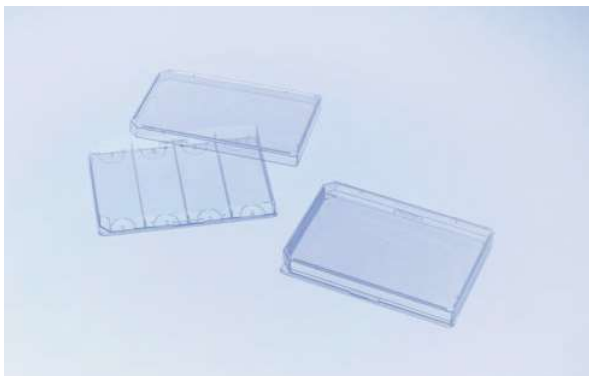
Height: 10 mm, Ø: 35 mm, Bottom: glass, Vent neck: yes

Item no.	Compartments	Growth area	Growth area / unit	Surface treatment	Working volume	Total volume	Total volume (well)	Working volume (well)	Sterile	Qty. inner / outer
627861	1	8.7 cm <sup>2</sup>		untreated	2.5 ml - 5 ml	10 ml			+	10 / 40
627860	1	8.7 cm <sup>2</sup>		TC	2.5 ml - 5 ml	10 ml			+	10 / 40
627965	1	8.7 cm <sup>2</sup>		Advanced TC	2.5 ml - 5 ml	10 ml			+	10 / 40
627871	4		1.9 cm <sup>2</sup>	untreated			1.5 ml	0.1 ml - 0.5 ml	+	10 / 40

Item no.	Compartments	Growth area	Growth area / unit	Surface treatment	Working volume	Total volume	Total volume (well)	Working volume (well)	Sterile	Qty. inner / outer
627870	4		1.9 cm <sup>2</sup>	TC			1.5 ml	0.1 ml - 0.5 ml	+	10 / 40
627975	4		1.9 cm <sup>2</sup>	Advanced TC			1.5 ml	0.1 ml - 0.5 ml	+	10 / 40

/ Application Note „Protein localisation using confocal laser scanning microscopy“ (F073101)

/ Application Note „Live cell imaging on Golgi morpholgy using the CELLview dish“ (F074048)



### OneWell Plate

### FourWell Plate

- / For the cultivation of a large number of cells the OneWell Plate with ANSI standard dimensions offers the best possible conditions.
- / The FourWell Plates allows users to culture cells on slides while remaining in accordance with an HTS-compatible plate. This four-chambered plate is particularly suitable for parallel experiments.

STERILE

FREE OF  
detectable  
DNase

FREE OF  
detectable  
human DNA

FREE OF  
detectable  
RNase

 non-  
cytotoxic

 non-  
pyrogenic

Height: 14.4 mm, Length: 127.8 mm, Width: 85.5 mm, Lid: yes, Vent nock: yes

Item no.	Well format	Growth area	Surface treatment	Product colour	Total volume (well)	Sterile	Qty. inner / outer
96077307	4		suspension	○ clear	18.6 ml	+	8 / 32
670190	1	95 cm <sup>2</sup>	suspension	○ clear	113.7 ml	+	8 / 32
670180	1	95 cm <sup>2</sup>	TC	○ clear	113.7 ml	+	8 / 32

/ Sample packs are available on request.



/ Watch our video:



## CELLSTAR®

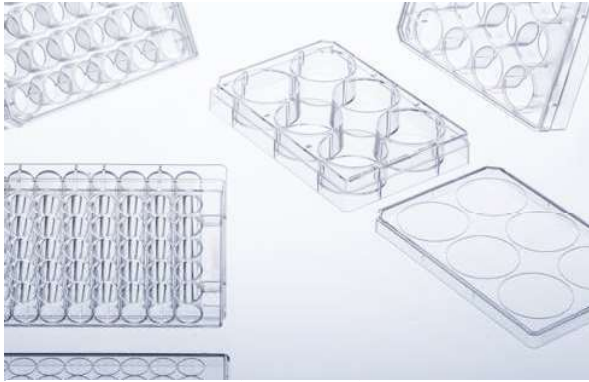
### CELL CULTURE MULTIWELL PLATES

**For both adherent and suspension cell culture, choose Greiner Bio-One's multiwell plates in either 6, 12, 24 or 48 well format.**

The special chimney wells in conjunction with low evaporation lids significantly reduce the risk of cross-contamination between the wells. The plates are easily stacked, both with and without lids. Due to their ad-

vanced design, the plates still exhibit important features like constant heat and gas exchange even when stacked. Uniform plate dimensions (well depth, diameter and distance between the wells) comply with ANSI standards, enabling easy manual and automated handling. Each plate is sterile, free of detectable DNase, RNase, human DNA, is non-pyrogenic and has a printed lot number for traceability.

- / With hydrophilic surface (TC surface treatment) for improved cell adhesion
- / With hydrophobic surface for suspension cultures and hybridoma cells
- / High clarity and low autofluorescence
- / Alphanumeric well coding



**Multiwell Plates**  
**6 / 12 / 24 / 48 Well Format**

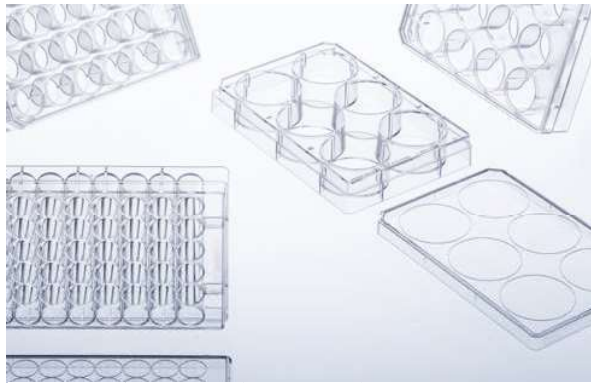
- / High transparency
- / Alphanumeric well coding
- / With hydrophilic surface (TC surface treatment) for improved cell adhesion
- / With hydrophobic surface for suspension cultures and hybridoma cells

<b>STERILE</b>	<b>FREE OF</b> detectable DNase	<b>FREE OF</b> detectable human DNA	<b>FREE OF</b> detectable RNase	 non- cytotoxic	 non- pyrogenic
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*Bottom: solid, Lid: yes, condensation rings*

Item no.	Well format	Growth area / unit	Raw material	Surface treatment	Product colour	Total volume (well)	Working volume (well)	Sterile	Qty. inner / outer
657160	6	9.6 cm <sup>2</sup>		TC	○ clear	16 ml	2 ml - 5 ml	+	1 / 100
665180	12	3.9 cm <sup>2</sup>	PS	TC	○ clear	6.5 ml	2 ml - 4 ml	+	1 / 100
662160	24	1.9 cm <sup>2</sup>		TC	○ clear	3.3 ml	0.5 ml - 1.5 ml	+	1 / 100
677180	48	1 cm <sup>2</sup>		TC	○ clear	1.7 ml	0.5 ml - 1 ml	+	1 / 100
657185	6			suspension	○ clear	16 ml		+	1 / 100
665102	12		PS	suspension	○ clear	6.5 ml		+	1 / 100
662102	24			suspension	○ clear	3.3 ml		+	1 / 100
677102	48			suspension	○ clear	1.7 ml		+	1 / 100





**Multiwell Plates**  
**Advanced TC**

The Advanced TC surface provides optimal conditions for the cultivation of sensitive and fastidious cells or the usage of restricted growth conditions.

- / Consistent and even cell attachment

<b>STERILE</b>	<b>FREE OF</b> detectable DNase	<b>FREE OF</b> detectable human DNA	<b>FREE OF</b> detectable RNase	non-cytotoxic	non-pyrogenic
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Bottom: solid, Surface treatment: Advanced TC, Lid: yes, condensation rings

Item no.	Well format	Growth area / unit	Raw material	Product colour	Total volume (well)	Working volume (well)	Sterile	Qty. inner / outer
657960	6	9.6 cm <sup>2</sup>		○ clear	16 ml	2 ml - 5 ml	+	1 / 100
665980	12	3.9 cm <sup>2</sup>	PS	○ clear	6.5 ml	2 ml - 4 ml	+	1 / 100
662960	24	1.9 cm <sup>2</sup>		○ clear	3.3 ml	0.5 ml - 1.5 ml	+	1 / 100
677980	48	1 cm <sup>2</sup>		○ clear	1.7 ml	0.5 ml - 1 ml	+	1 / 100

- / Forum No. 12: Advanced TC: An innovative surface improving cellular assays (F071104)
- / Application Report „Advanced TC for improving the cultivation / differentiation of embryonic stem cells“ (F076036)



**Multiwell Plates**  
**CELLCOAT®**

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

non-cytotoxic
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Bottom: solid, Surface treatment: CELLCOAT®, Lid: yes, condensation rings

Item no.	Well format	Growth area / unit	Protein coating	Product colour	Total volume (well)	Working volume (well)	Qty. inner / outer
657950	6	9.6 cm <sup>2</sup>	Collagen Type I	○ clear	16.1 ml	2 ml - 5 ml	5 / 50
662950	24	1.9 cm <sup>2</sup>	Collagen Type I	○ clear	3.3 ml	0.5 ml - 1 ml	5 / 50
657940	6	9.6 cm <sup>2</sup>	Poly-D-Lysine	○ clear	16.1 ml	2 ml - 5 ml	5 / 50
662940	24	1.9 cm <sup>2</sup>	Poly-D-Lysine	○ clear	3.3 ml	0.5 ml - 1 ml	5 / 50
657930	6	9.6 cm <sup>2</sup>	Poly-L-Lysine	○ clear	16.1 ml	2 ml - 5 ml	5 / 50
662930	24	1.9 cm <sup>2</sup>	Poly-L-Lysine	○ clear	3.3 ml	0.5 ml - 1 ml	5 / 50



**Multiwell Plates**  
**Cell-Repellent Surface**

Cell culture vessels with cell-repellent surface reliably prevent cell attachment in suspension cultures of semi adherent / adherent cell lines where standard hydrophobic surfaces generally used for suspension culture are insufficient.

STERILE	FREE OF detectable DNase	FREE OF detectable human DNA	FREE OF detectable RNase	non-cytotoxic	non-pyrogenic
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Well profile: F-bottom, Bottom: solid, Raw material: PS, Surface treatment: cell-repellent, Lid: yes, condensation rings

Item no.	Well format	Product colour	Total volume (well)	Working volume (well)	Sterile	Qty. inner / outer
657970	6	○ clear	16.1 ml	2 ml - 5 ml	+	1 / 5
662970	24	○ clear	3.3 ml	0.5 ml - 1.5 ml	+	1 / 5
677970	48	○ clear	1.7 ml	0.5 ml - 1 ml	+	1 / 5

/ Forum No. 17: CELLSTAR® Cell Culture Vessels with Cell-Repellent Surface (F073777)

/ Application Report "Advantage of CELLSTAR® Cell Culture Vessels with Cell-Repellent Surfaces for 3-D Cell Culture in Hydrogels" (F073792).



- / Forum No. 8: ThinCert® cell culture products – Overview (F073017)
- / Application Note „Immuno cytochemistry“(F073100)
- / For further information and application notes please refer to our website: [www.gbo.com](http://www.gbo.com)

## THINCERT® CELL CULTURE INSERTS FOR 6, 12 AND 24 WELL MULTIWELL PLATES

**For advanced cell and tissue culture applications, Greiner Bio-One offers a broad range of membrane supports - ThinCert®.**

Combining 6 different membrane specifications (pore size and density) in geometries to fit 6, 12 and 24 well plates, the ThinCert® cell culture inserts are suitable for a wide range of applications including transport, secretion and diffusion studies, migrational experiments, cytotoxicity testing, co-cultures, trans epithelial electric resist-

ance (TEER) measurements, as well as primary cell culture.

ThinCert® cell culture inserts are compatible with standard CELLSTAR® multiwell plates from Greiner Bio-One, and are pre-packed together with the requisite number of plates. The automated production process includes double optical control of each insert produced, ensuring that any biological contamination is avoided. The sterility of the single blisterpacked inserts and multiwell plates is ensured by irradiation.

- / Stable clear polystyrene housing
- / Sealed PET capillary pore membrane
- / Pre-configured multiwell plates with ThinCert® cell culture inserts available on request



## ThinCert® Cell Culture Inserts

## 6 Well

- / Hanging geometry
- / Improved cell adhesion through physical surface treatment
- / Simplified pipetting due to self-lift geometry
- / Enhanced pipetting access and gas exchange

STERILE

FREE OF  
detectable  
DNaseFREE OF  
detectable  
human DNAFREE OF  
detectable  
RNasenon-  
cytotoxicnon-  
pyrogenic

Feature: 4 multiwell plates / box, Height: 16.25 mm, Ø internal: 24.85 mm, Ø external: 27.85 mm, Cultural surface: 452.4 mm<sup>2</sup>, Surface treatment: TC, Working volume (ThinCert®): 1 ml - 3.6 ml, Working volume (well): 2 ml - 4.15 ml

Item no.	Pore density	Ø pore	Optical membrane properties	Sterile	Qty. inner / outer
657640	1 x 10 <sup>8</sup> cm <sup>2</sup>	0.4 µm	translucent	+	1 / 24
657641	2 x 10 <sup>6</sup> cm <sup>2</sup>	0.4 µm	clear	+	1 / 24
657610	2 x 10 <sup>6</sup> cm <sup>2</sup>	1 µm	clear	+	1 / 24
657630	0,6 x 10 <sup>6</sup> cm <sup>2</sup>	3 µm	clear	+	1 / 24
657631	2 x 10 <sup>6</sup> cm <sup>2</sup>	3 µm	translucent	+	1 / 24
657638	0,15 x 10 <sup>6</sup> cm <sup>2</sup>	8 µm	translucent	+	1 / 24



## ThinCert® Cell Culture Inserts

## 12 Well

- / Hanging geometry
- / Improved cell adhesion through physical surface treatment
- / Simplified pipetting due to self-lift geometry
- / Enhanced pipetting access and gas exchange

STERILE

FREE OF  
detectable  
DNaseFREE OF  
detectable  
human DNAFREE OF  
detectable  
RNasenon-  
cytotoxicnon-  
pyrogenic

Feature: 4 multiwell plates / box, Height: 16.25 mm, Ø internal: 13.85 mm, Ø external: 15.85 mm, Cultural surface: 113.1 mm<sup>2</sup>, Surface treatment: TC, Working volume (ThinCert®): 0.3 ml - 1 ml, Working volume (well): 1 ml - 2 ml

Item no.	Pore density	Ø pore	Optical membrane properties	Sterile	Qty. inner / outer
665640	1 x 10 <sup>8</sup> cm <sup>2</sup>	0.4 µm	translucent	+	1 / 48
665641	2 x 10 <sup>6</sup> cm <sup>2</sup>	0.4 µm	clear	+	1 / 48
665610	2 x 10 <sup>6</sup> cm <sup>2</sup>	1 µm	clear	+	1 / 48

Item no.	Pore density	Ø pore	Optical membrane properties	Sterile	Qty. inner / outer
665630	0,6 x 10 <sup>6</sup> cm <sup>2</sup>	3 µm	clear	+	1 / 48
665631	2 x 10 <sup>6</sup> cm <sup>2</sup>	3 µm	translucent	+	1 / 48
665638	0,15 x 10 <sup>6</sup> cm <sup>2</sup>	8 µm	translucent	+	1 / 48



**ThinCert® Cell Culture Inserts**

**24 Well**

- / Hanging geometry
- / Improved cell adhesion through physical surface treatment
- / Simplified pipetting due to self-lift geometry
- / Enhanced pipetting access and gas exchange

STERILE

FREE OF detectable DNase

FREE OF detectable human DNA

FREE OF detectable RNase

non-cytotoxic

non-pyrogenic

Feature: 2 multiwell plates / box, Height: 16.25 mm, Ø internal: 8.4 mm, Ø external: 10.4 mm, Cultural surface: 33.6 mm<sup>2</sup>, Surface treatment: TC, Working volume (ThinCert®): 0.1 ml - 0.35 ml, Working volume (well): 0.4 ml - 1.2 ml

Item no.	Pore density	Ø pore	Optical membrane properties	Sterile	Qty. inner / outer
662640	1 x 10 <sup>8</sup> cm <sup>2</sup>	0.4 µm	translucent	+	1 / 48
662641	2 x 10 <sup>6</sup> cm <sup>2</sup>	0.4 µm	clear	+	1 / 48
662610	2 x 10 <sup>6</sup> cm <sup>2</sup>	1 µm	clear	+	1 / 48
662630	0,6 x 10 <sup>6</sup> cm <sup>2</sup>	3 µm	clear	+	1 / 48
662631	2 x 10 <sup>6</sup> cm <sup>2</sup>	3 µm	translucent	+	1 / 48
662638	0,15 x 10 <sup>6</sup> cm <sup>2</sup>	8 µm	translucent	+	1 / 48

**ThinCert® Plate****6 / 12 Well**

- / Optimised for use with ThinCert® cell culture inserts
- / Deep wells for an increased volume of medium in air-lift culture
- / Notches for fixed insert position
- / Available in 6 and 12 well format

STERILE

FREE OF  
detectable  
DNaseFREE OF  
detectable  
human DNAFREE OF  
detectable  
RNase
 non-  
cytotoxic

 non-  
pyrogenic

Height: 39.5 mm, Length: 129.5 mm, Width: 86.6 mm, Lid: yes, yes, condensation rings

Item no.	Well format	Working volume (well)	Sterile	Qty. inner / outer
657110	6	≤20 ml	+	1 / 50
665110	12	≤4 ml	+	1 / 60