SARSTEDT

Ready. Set. Grow!

Cell culture products
by SARSTEDT

Life Science

SARSTEDT quality seal for cell and tissue culture products

Come Grow With Us – cell and tissue cultures are not just used in basic research, but increasingly, also in applied biotechnology and in clinical and pharmaceutical research. Products of the highest possible purity and quality are required for toxicity tests, quality controls of biochemical processes, industrial production systems (e.g. production of monoclonal antibodies) and many more applications.

Compliance with quality standards for cell and tissue culture is necessary to ensure that experiments are comparable and reproducible.

For more than 30 years, SARSTEDT has manufactured a wide range of certified consumables for working with cell and tissue cultures to meet these requirements.

TC Tested

Since 1990, SARSTEDT has been offering its customers high-quality cell culture products produced in cleanroom conditions by trained personnel, wearing protective clothing and using automated production processes.

In accordance with our basic principle that products which come into contact with cells must not have a disruptive effect on the cells, these products are produced under the strictest cleanroom conditions and are labeled with the 'TC Tested' quality logo.

We guarantee compliance with the following limits:

- Sterility validated according to the ISO 11137 series of standards
- Pyrogens/endotoxins <0.06 EU/ml
- Non-cytotoxic in accordance with the ISO 10993 series of standards
- Human DNA <0.5 pg/µl
- Bacterial DNA <0.02 pg/µl
- DNase $<7.1 \times 10^{-5}$ U/µl
- RNase $<1.4 \times 10^{-10}$ Kunitz/µl

Cryo Performance Tested

During 'vital preservation' in CryoPure tubes, cell and tissue samples must not be exposed to additional risks in terms of contamination with disruptive substances. Sarstedt CryoPure tubes are therefore subjected to a number of tests and, after passing the defined examinations, are certified as follows:

We guarantee compliance with the following limits:

- **Sterile**
  Based on ISO 11137
- **Pyrogen-free/endotoxin-free**
  <0,06 EU/ml
- **Non-cytotoxic**
  In compliance with ISO 10993-5
- **Non-mutagenic**
  Proof of assessment of mutagen-free status was conducted according to Ames Test II
- **DNA-free**
  Human DNA <0.5 pg/µl, bacterial DNA <0.02 pg/µl
- **DNase/RNase-free**
  DNase $<1x10^{-5}$ U/µl, RNase $<1x10^{-9}$ Kunitz units/µl
- CE IVD

Try it out for free and with no obligation!!

shop.sarstedt.us/cellculture

Growth surfaces and color coding

A basic requirement for the successful cultivation of cells in-vitro is to simulate the in vivo environment of the relevant cell type as accurately as possible. The surface condition of the culture vessel is particularly important because many cell types can only survive, proliferate and differentiate following successful adhesion. In order to meet the requirements for as many different cell types as possible, SARSTEDT offers flasks, dishes and plates with three different growth surfaces. To ensure clear identification of the vessels even after they have been removed from the packaging, the products are labeled as follows according to the SARSTEDT color coding system:

SARSTEDT standard surface for adherent cells

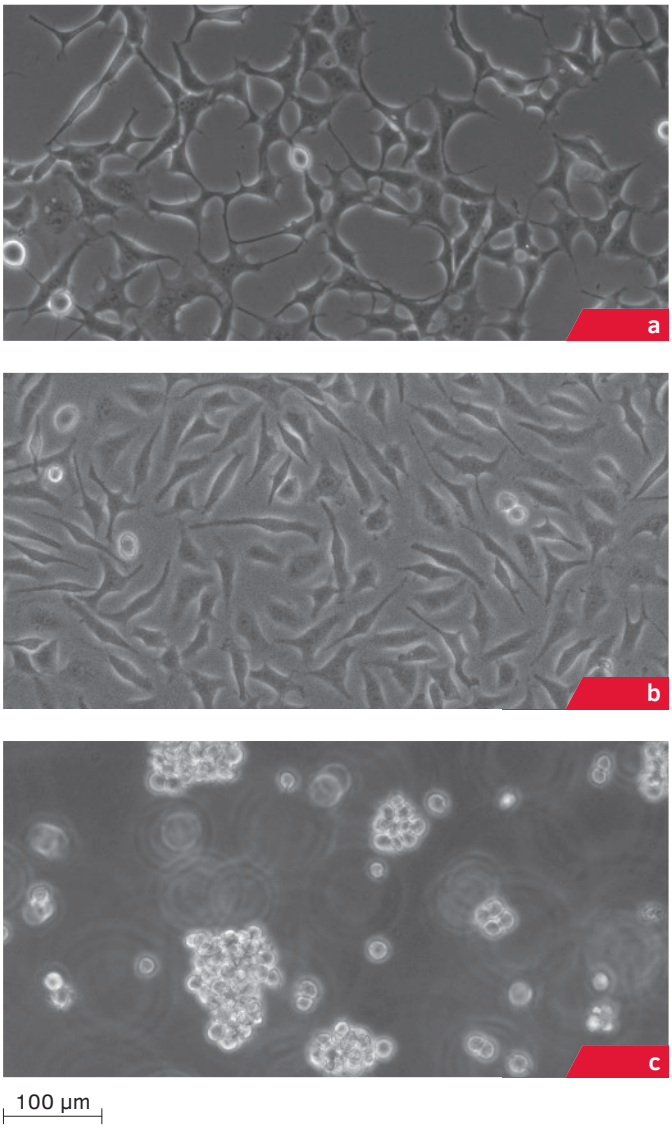
Hydrophilic groups are introduced into the surface via a special treatment of the polystyrene surface. This allows cell surface proteins to form and enables the cells to adhere to the plastic surface. The hydrophilic standard growth surface, which is coded red, therefore provides an optimum culture substrate for many adherent cells.

SARSTEDT Cell⁺ surface for difficult adherent cells

Primary cells, sensitive cell culture lines and cells which are cultivated under serum-reduced/serum-free conditions have particularly high requirements for the surface of the cell culture vessel. The yellow-coded Cell⁺ growth surface is designed specifically for such cells. Additional polar groups are introduced into the hydrophilic surface via a special treatment of the plastic surface. This leads to improved imitation of the in vivo environment and therefore to the adhesion of difficult cell types. Due to its properties, the Cell⁺ surface can make the use of coated culture vessels redundant in many cases.

SARSTEDT suspension culture surface

Culture vessels with the green, hydrophobic growth surfaces are ideally suited to suspension cells (usually cells of lymphoid origin, hybridoma cells, etc.) that are not adherently cultivated in solution. The hydrophobic surface minimizes cell losses caused by unwanted microadhesion during sub-cultivation



The cultivation of various cell types on SARSTEDT growth surfaces clearly shows the vitality of the various cell types*. a) HEK293 cells cultivated on the standard TC surface for 48 hours. b) CHO cells cultivated under serum-reduced conditions (1%) on the Cell⁺ surface for 24 h. c) Jurkat cells cultivated on the suspension cell surface for 72 h. The measuring bar corresponds to 100 µm.

* Our 'Growth Surface References' brochure (20.783) provides an overview of cells that have been successfully cultivated on our various growth surfaces.

Cell culture basics

Cell culture flasks

For cell culture, SARSTEDT offers flasks with a growth surface of 25 cm^2, 75 cm^2 and 175 cm^2. All cell culture flasks are made of high-grade transparent polystyrene, which is processed into a flat growth surface that is ideal for microscopic observation. All cell culture flasks are tested and certified according to the 'TC Tested' quality seal (see p. 2).

Product characteristics of SARSTEDT cell culture flasks

The flask geometry has the following distinguishing characteristics:

- All corners accessible with serological pipettes and cell scrapers. **(1)**
- Large labeling fields on both sides of the neck and printed white and engraved graduation marks, to facilitate use of the products. **(2)**
- High stability against overturning reduces the risk of contamination. In addition, the stacking edge allows flasks to be stored securely on top of each other.
- The optimized, canted flask neck and the anti-drip rim allow for easy tilting of the medium, without the risk of contamination from medium spilling over. **(3)**
- The lot no. and expiration date are printed on each flask for easy traceability after removal from the packaging. **(4)**
- All SARSTEDT cell culture flasks are available with three different growth surfaces and can be clearly identified by the colored lids:
  Red = adherent cells
  Yellow = difficult, adherent cells
  Green = suspension cells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The quick-release cap is particularly user-friendly, because only a 1/3 turn is needed to close or open it. The ribbed quick-release cap is available in two designs:

- TThe **filter cap** has a membrane with a pore size of 0.2 µm, ensuring a consistent, sterile gas exchange. The hydrophobic properties of the filter also minimize the risk of contamination.
- The **two-position screw cap** (without filter) enables gas-tight sealing of the flasks in the closed position. In the ventilation position, the cells can be cultivated with a consistent gas exchange (arrows point up and down). A recognizable click confirms that the cap has been secured in the ventilation position and will not fall off. A gap in the ribbing, together with arrows on the cap, allow for a simple haptic and visual check of the closure position.

open vented closed

Ordering information

Order no.	Color code*	Growth surface [cm²]	Cap	Recommended working volume [ml]	Max. volume [ml]	Packaging bag/ case
83.3910		25	Without filter	7	12.5	10/300
83.3910.002		25	With filter	7	12.5	10/300
83.3911		75	Without filter	21	55	5/100
83.3911.002		75	With filter	21	55	5/100
83.3912		175	Without filter	50	125	5/40
83.3912.002		175	With filter	50	125	5/40
83.3910.300		25	Without filter	7	12.5	10/300
83.3910.302		25	With filter	7	12.5	10/300
83.3911.300		75	Without filter	21	55	5/100
83.3911.302		75	With filter	21	55	5/100
83.3912.300		175	Without filter	50	125	5/40
83.3912.302		175	With filter	50	125	5/40
83.3910.500		25	Without filter	7	12.5	10/300
83.3910.502		25	With filter	7	12.5	10/300
83.3911.500		75	Without filter	21	55	5/100
83.3911.502		75	With filter	21	55	5/100
83.3912.500		175	Without filter	50	125	5/40
83.3912.502		175	With filter	50	125	5/40

* = adherent cells = difficult, adherent cells = suspension cells

Zubehör

Order no.	Color code*	Cap	Design	Packaging bag/case
83.3990.025		Without filter	for T 25	25/100, individual, sterile
83.3990.075		Without filter	for T 75	25/100, individual, sterile
83.3990.175		Without filter	for T 175	25/100, individual, sterile

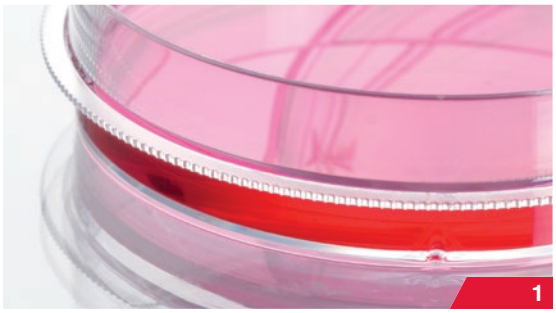
Cell culture dishes

For the cultivation of cells in cell culture dishes, SARSTEDT offers 35 mm, 60 mm, 100 mm and 150 mm dishes that are tested and certified according to the 'TC Tested' quality seal (see p. 2). The dishes are produced from high-grade transparent polystyrene, meaning that a planar growth surface of excellent transparency is produced, allowing visual inspection of cell growth.

Product characteristics of SARSTEDT cell culture dishes

The cell culture dishes have the following distinguishing characteristics:

- The SUREGrip is a raised, notched ring around the dish base that permits secure and convenient gripping of both parts of the dish, even when stacked. **(1)**
  - Secure handling of the dish reduces the risk of contamination.
- Clearly visible and tangible arrows on the cover and dish enable the two parts to be placed together correctly. **(2)**
- A continuous gas exchange and securely fitted lid are ensured by ventilation cams on the lid.
- Distinct stacking rings on the lid and base allow for secure stacking of several dishes.
- For cloning experiments, SARSTEDT offers 35 mm and 60 mm diameter dishes with a grid. **(3)**
- For better traceability, even after removal from the packaging, each dish is labeled using the color code as well as the lot no. and expiration date. **(4)**
- All cell culture dishes are available with three different growth surfaces:
  Red = adherent cells
  Yellow = difficult, adherent cells
  Green = suspension cells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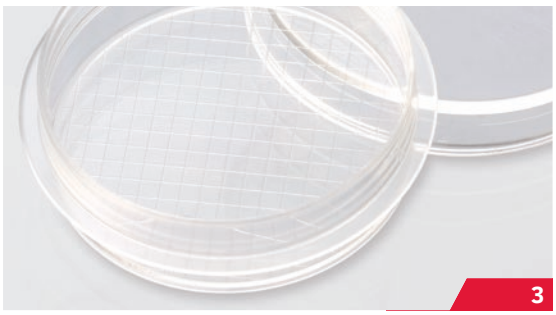
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The cell culture dishes are packed in a bag with a re-sealable mini-grip, which is closed with a tamper-evident seal until it is opened for the first time.

Ordering information

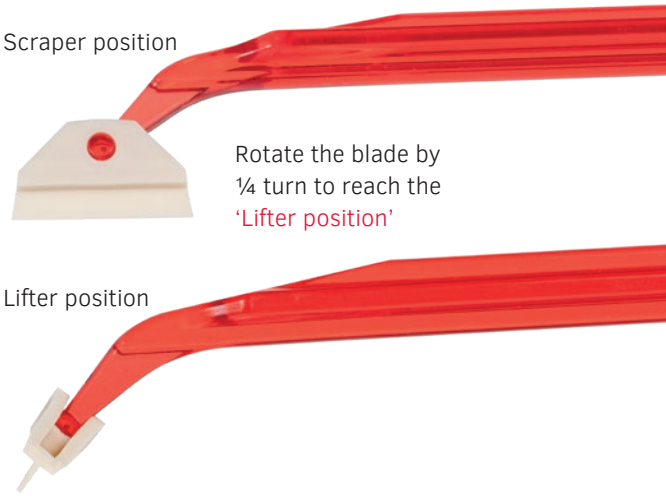
Order no.	Color code*	Diameter/ height [mm]	Growth surface [cm²]	Grid	Recommended working volume [ml]	Packaging bag/ case
83.3900		35/10	8	no	3	10/500
83.3900.002		35/10	8	yes	3	10/500
83.3901		60/15	21	no	5	10/500
83.3901.002		60/15	21	yes	5	10/500
83.3902		100/20	58	no	13	10/500
83.3903		150/20	152	no	36	5/100
83.3900.300		35/10	8	no	3	10/500
83.3901.300		60/15	21	no	5	10/500
83.3902.300		100/20	58	no	13	10/300
83.3903.300		150/20	152	no	36	5/100
83.3900.500		35/10	8	no	3	10/500
83.3901.500		60/15	21	no	5	10/500
83.3902.500		100/20	58	no	713	10/300

* = adherent cells = difficult, adherent cells = suspension cells

Cell scrapers

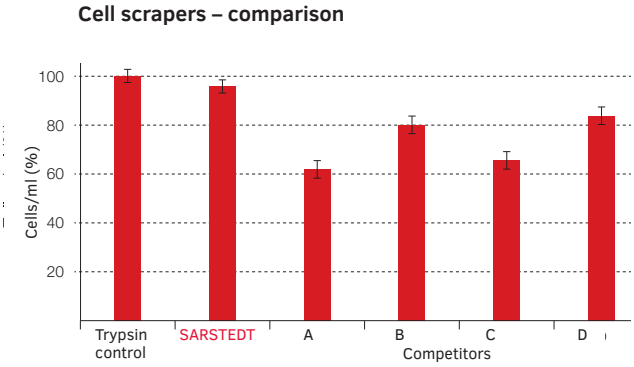
For easy and complete recovery of adherent cells

- Ergonomic polystyrene handle with ribbed, non-slip grip
- Cell-friendly blade made of a highly flexible, rubber-like material
- In all sizes, the blade can easily be switched from the scraper to the lifter position
- Three sizes: S, M and L
- Individual sterile packaging, pyrogen-free/endotoxin-free and non-cytotoxic



Comparison of the SARSTEDT cell scrapers with four competitor cell scrapers:

The graph shows that, in a comparison with the Trypsin control, it was possible to detach the highest cell count per ml when using the SARSTEDT cell scrapers (96%). With the competitor products (A, B, C and D), the cell yields were between 62% and 84% in a comparison with the Trypsin control. The quality of the cell scrapers was compared by cultivating cells under the same conditions and harvesting them using the same technique. Cell vitality, on the other hand, was approx. 95% for all cell scrapers.



Ordering information, cell scraper

Order no.	Description	Blade [cm]	Handle length [cm]	Packaging blisters/case	Field of use
83.3950	Cell scraper with two-position blade	1.35	24.0	1/100	• Cell culture flasks: T-25 • Cell culture plates: 24-, 12-, 6-well • Cell culture dishes, Cell culture tubes
83.3951	Cell scraper with two-position blade	1.7	24.0	1/100	• Cell culture flasks: T-75 • Cell culture plates: 12- and 6-well • Cell culture dishes: 35 x 10/60 x 15/100 x 20/150 x 20
83.3952	Cell scraper with two-position blade	1.7	36.0	1/100	• Cell culture flasks: T-175 • Cell culture plates: 12- and 6-well • Cell culture dishes: 35 x 10/60 x 15/100 x 20/150 x 20 • Roller bottles

Cell culture plates

For multiple cultivation on a medium to small scale, SARSTEDT offers cell culture plates with 6, 12, 24, 48 and 96 wells. The plates are produced from high-grade transparent polystyrene and both the wells and the entire plate are exceptionally flat and uniform. The highly transparent base is suitable for microscopic measurements from below. All cell culture plates are tested and certified according to the 'TC Tested' quality seal (see p. 2).

Product characteristics of SARSTEDT cell culture plates

The external dimensions of SARSTEDT cell culture plates are based on ANSI/SLAS standard 1-2004: Microplates – Footprint Dimensions and can be used for analyses in device holders with these dimensions. Further characteristics of the plates are as follows:

- For better traceability, even after removal from the packaging, each plate is labeled with the color code as well as the lot no. and expiration date. **(1)**
- For quick guidance when filling the wells, the wells are alphanumerically labeled on the edge **(2)** and in the areas between **(3)** the wells.
- Free-standing wells reduce the risk of contamination when pipetting. **(3)** + **(4)**
- Non-slip side grids in the base make it easier to securely grasp the entire plate. The transparent side walls of the base enable the visual inspection of the medium. **(4)**
- Both air vents and condensation rings are integrated into the lid; together, they ensure consistent gas exchange while simultaneously minimizing evaporation.
- All cell culture plates are available with three different growth surfaces:
  Red = adherent cells
  Yellow = difficult, adherent cells
  Green = suspension cells

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Ordering information

Order no.	Color code*	Number of wells	Base shape	Growth surface per well [cm²]	Working volume [ml]	Packaging blisters/case
83.3920		6		8.87	4	1/50
83.3920.005		6		8.87	4	5/100
83.3921		12		3.65	2	1/50
83.3921.005		12		3.65	2	5/100
83.3922		24		1.82	1	1/50
83.3922.005		24		1.82	1	5/100
83.3923		48		0.64	0.5	1/50
83.3923.005		48		0.64	0.5	5/100
83.3924		96		0.29	0.2	1/50
83.3924.005		96		0.29	0.2	5/100
83.3925		96		–	max. 0.31	1/50
83.3926		96		–	max. 0.29	1/50
83.3920.300		6		8.87	4	1/50
83.3921.300		12		3.65	2	1/50
83.3922.300		24		1.82	1	1/50
83.3923.300		48		0.64	0.5	1/50
83.3924.300		96		0.29	0.2	1/50
83.3920.500		6		8.87	4	1/50
83.3921.500		12		3.65	2	1/50
83.3922.500		24		1.82	1	1/50
83.3923.500		48		0.64	0.5	1/50
83.3924.500		96		0.29	0.2	1/50
83.3925.500		96		–	max. 0.31	1/50
83.3926.500		96		–	max. 0.29	1/50

* = adherent cells = difficult, adherent cells = suspension cells

BIOFLOAT™— Spheroid culture

BIOFLOAT™
3D cell culture
technology

In many areas of biomedical research, in vitro models are indispensable. The most conventional form is the two-dimensional cell culture, but discrepancies often occur when transferring the results to an entire organism. The aim of the three-dimensional cell culture is therefore to close this gap between the in vitro and in vivo situation.

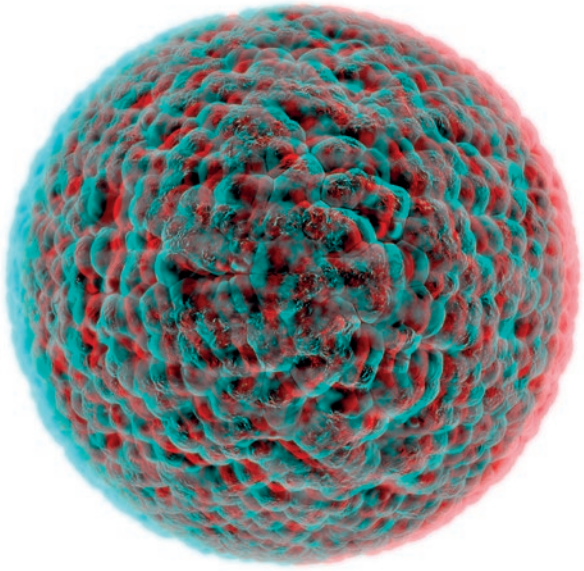
Spheroid cultures offer a simple and cost-effective variant of 3D cell culture. The cells form a three-dimensional cellular aggregate with pronounced cell-cell and cell-matrix contacts.

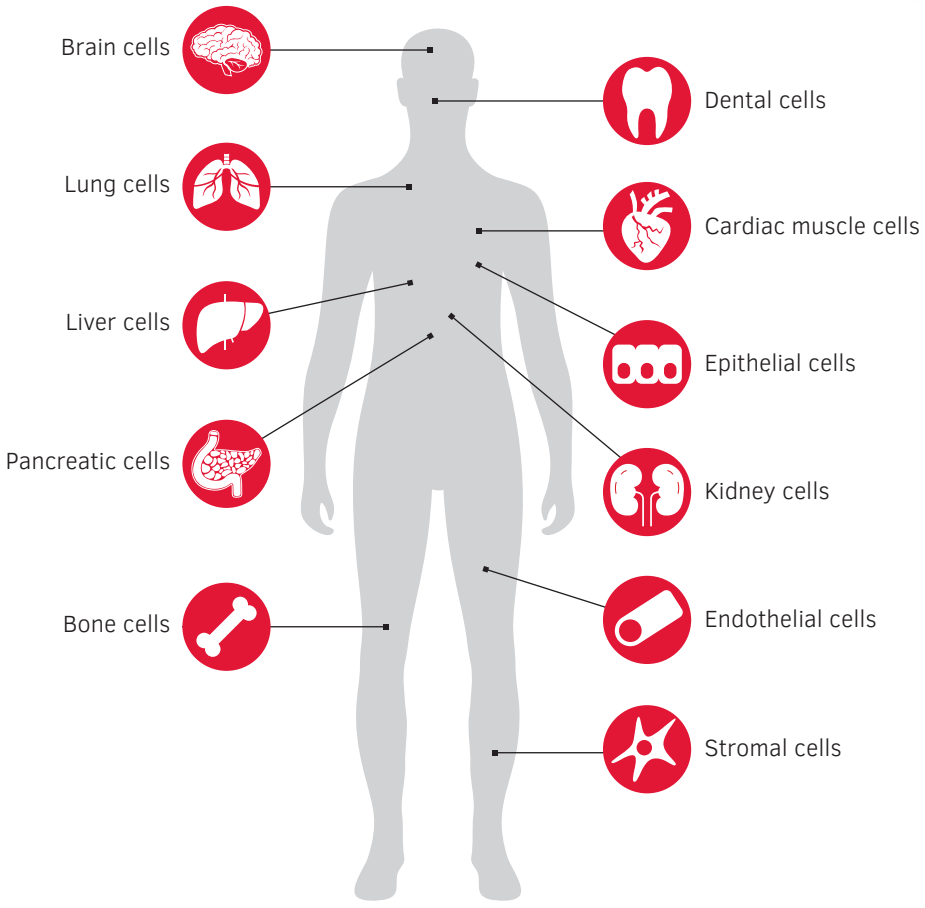
Advantages of spheroid culture

- Increased cell-cell contacts
- Pronounced extracellular matrix
- Improved in vitro model

BIOFLOAT™ solves your spheroid culture challenges

Some challenging spheroid cultures have already been successfully established using the BIOFLOAT™ cell culture surface (e.g. spheroids from primary hepatocytes).





Detailed list of tested cell types / cell lines:

sarstedt.com/
biofloat-zt-us

Nice and round—3D cell cultures with BIOFLOAT™ cell culture plates

BIOFLOAT™—Benefits at a glance

- Easy handling thanks to robust coating
- Defined and xeno-free composition for a safe cultivation with high reproducibility
- Fast and reliable spheroid formation for better planning of your daily laboratory routine

The reliable quality of the BIOFLOAT™ cell culture surface enables the formation of perfect spheroids even for challenging cells. This also includes cells that do not form spheroids on existing products.

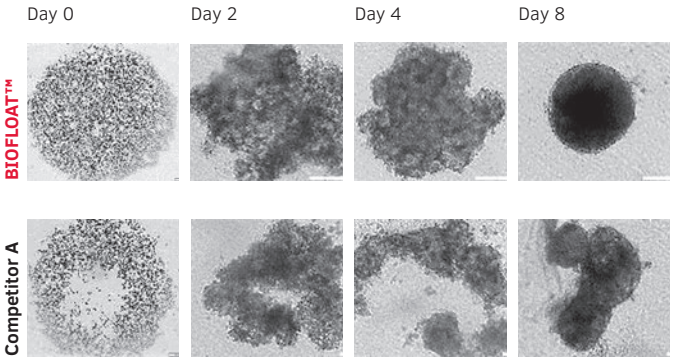


Fig.: 100 µl of a suspension of primary human hepatocytes with a concentration of 25,000 cells/ml (equivalent to 2,500 cells/well) was seeded per well. After spheroid formation, 50 µl of medium was exchanged every 48-72 h.

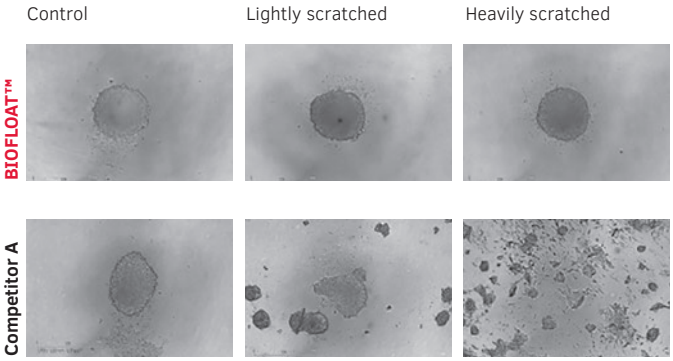


Fig.: The well bottom was lightly scratched using a standard pipette tip (once all around with moderate pressure) and heavily scratched (30 s with strong pressure). 200 µl of a suspension of 3T3 cells with a concentration of 30,000 cells/ml (corresponding to 6,000 cells/well) was then seeded per well.

The SARSTEDT BIOFLOAT™ plate is individually sterile-packed in an aluminium bag. It is also endotoxin-free and non-cytotoxic.

Order information

Order no.	Name	Number of wells	Bottom shape	Packaging
83.3925.400	Cell culture plate, 96-well, surface: BIOFLOAT™, round bottom	96	◡	1 pc./aluminium bag 4 Pcs./Inner carton 24 Pcs./Outer carton
83.3927.400	Cell culture plate, 384-well, surface: BIOFLOAT™, round bottom	384	◡	

Try it out for free & without obligation!

sarstedt.com/biofloat-us

TC inserts

SARSTEDT TC (Tissue Culture) inserts are easy-to-use inserts for TC plates. When used in combination with our TC plates, the inserts form a 2-compartment cell culture system in which the in vivo situation of cells can be simulated extremely well. Our TC inserts are therefore suitable for performing many complex experiments in cell and tissue culture:

- Transport, secretion and diffusion studies
- Migration experiments
- Cytotoxicity tests
- Co-cultures
- Transepithelial electrical resistance (TEER) measurements
- Primary cell cultures
- 3D cell cultures
- etc.

The exceptionally user-friendly design of the suspended SARSTEDT TC inserts boasts the following characteristics:

- Durable frame made from highly transparent polystyrene (PS).
- Asymmetrical design for easy pipetting in the well (Fig. 1a).
- Spacers prevent fluid from getting drawn up between the insert and the well.
- Curved upper edge allows for optimal gas exchange (see Fig 1b).

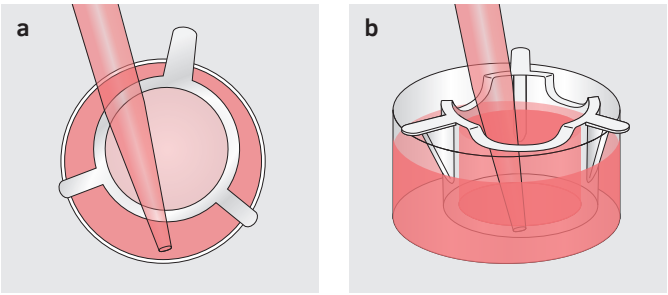


Figure 1

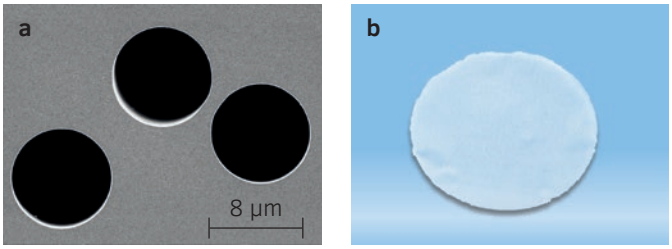


Figure 2

Membrane properties

The TC inserts are provided with a PET (polyester) membrane and are available in five different pore sizes (0.4 µm, 1 µm, 3 µm, 5 µm and 8 µm) and two optical properties (transparent and translucent). Our PET membrane offers the following advantages:

- Ultra-thin, high-quality track-etched PET membrane with a defined pore size (Fig. 2a).
- Both translucent (higher pore density, cloudy) and transparent membranes (lower pore density) exhibit a defined pore density.
- Optimal cell adhesion with surface treatment (TC treated) on both sides.
- The chemical properties of the PET membrane minimize the non-specific binding of molecules.
- High chemical resistance for easy fixing and staining of the cells.
- Detached membranes remain flat for convenient further processing and microscope examination (Fig. 2b).

General information on the application of SARSTEDT TC inserts:

- Membranes with small pore sizes (0.4 µm, 1 µm) are suitable for applications in which the migration of cells through the membrane pores is not desired. In co-culture experiments, for example, cells can be cultivated in close proximity to one another without the cell types becoming mixed together.
- Membranes with larger pores are recommended for experiments in which the migration of cells through the pores to the underside of the membrane should be possible. Depending on the cell type, membranes with a pore size of 3 µm, 5 µm or 8 µm should be used for performing chemotaxis, invasion and migration studies.
- Translucent membranes with a pore diameter of 0.4 µm allow for optimal basolateral diffusion for transport, secretion, diffusion and cytotoxicity studies, due to the high pore density.
- Translucent membranes are suitable for both electron microscopy and TEER (transepithelial electrical resistance) experiments.
- Transparent membranes can be used for both light and electron microscopy.

The TC inserts are compatible with the corresponding TC plates (see page 12 and 13). All designs are pyrogen-free/ endotoxin-free, non-cytotoxic and available in sterile individual packaging.

Ordering information

Order no.	Format	Membrane material	Pore Ø [µm]	Pore density [Pores/cm²]	Optical property	Membrane thickness [µm]	Growth area [cm²]	Working volume [ml]		Packaging blisters/case
								Insert	Well	
83.3930.040	6-well	PET	0.4	1 x 10^8	Transluzent	12	4.5	1–4	2.4–4.8	1 / 24
83.3930.041		PET	0.4	2 x 10^6	Transparent	12	4.5	1–4	2.4–4.8	1 / 24
83.3930.101		PET	1.0	2 x 10^6	Transparent	11	4.5	1–4	2.4–4.8	1 / 24
83.3930.300		PET	3.0	2 x 10^6	Transluzent	9	4.5	1–4	2.4–4.8	1 / 24
83.3930.500		PET	5.0	6 x 10^5	Transluzent	10	4.5	1–4	2.4–4.8	1 / 24
83.3930.800		PET	8.0	2 x 10^5	Transluzent	11	4.5	1–4	2.4–4.8	1 / 24
83.3931.040	12-well	PET	0.4	1 x 10^8	Transluzent	12	1.1	0.2–0.8	1.2–2.4	1 / 48
83.3931.041		PET	0.4	2 x 10^6	Transparent	12	1.1	0.2–0.8	1.2–2.4	1 / 48
83.3931.101		PET	1.0	2 x 10^6	Transparent	11	1.1	0.2–0.8	1.2–2.4	1 / 48
83.3931.300		PET	3.0	2 x 10^6	Transluzent	9	1.1	0.2–0.8	1.2–2.4	1 / 48
83.3931.500		PET	5.0	6 x 10^5	Transluzent	10	1.1	0.2–0.8	1.2–2.4	1 / 48
83.3931.800		PET	8.0	2 x 10^5	Transluzent	11	1.1	0.2–0.8	1.2–2.4	1 / 48
83.3932.040	24-well	PET	0.4	1 x 10^8	Transluzent	12	0.3	0.1–0.4	0.8–1.6	1 / 48
83.3932.041		PET	0.4	2 x 10^6	Transparent	12	0.3	0.1–0.4	0.8–1.6	1 / 48
83.3932.101		PET	1.0	2 x 10^6	Transparent	11	0.3	0.1–0.4	0.8–1.6	1 / 48
83.3932.300		PET	3.0	2 x 10^6	Transluzent	9	0.3	0.1–0.4	0.8–1.6	1 / 48
83.3932.500		PET	5.0	6 x 10^5	Transluzent	10	0.3	0.1–0.4	0.8–1.6	1 / 48
83.3932.800		PET	8.0	2 x 10^5	Transluzent	11	0.3	0.1–0.4	0.8–1.6	1 / 48

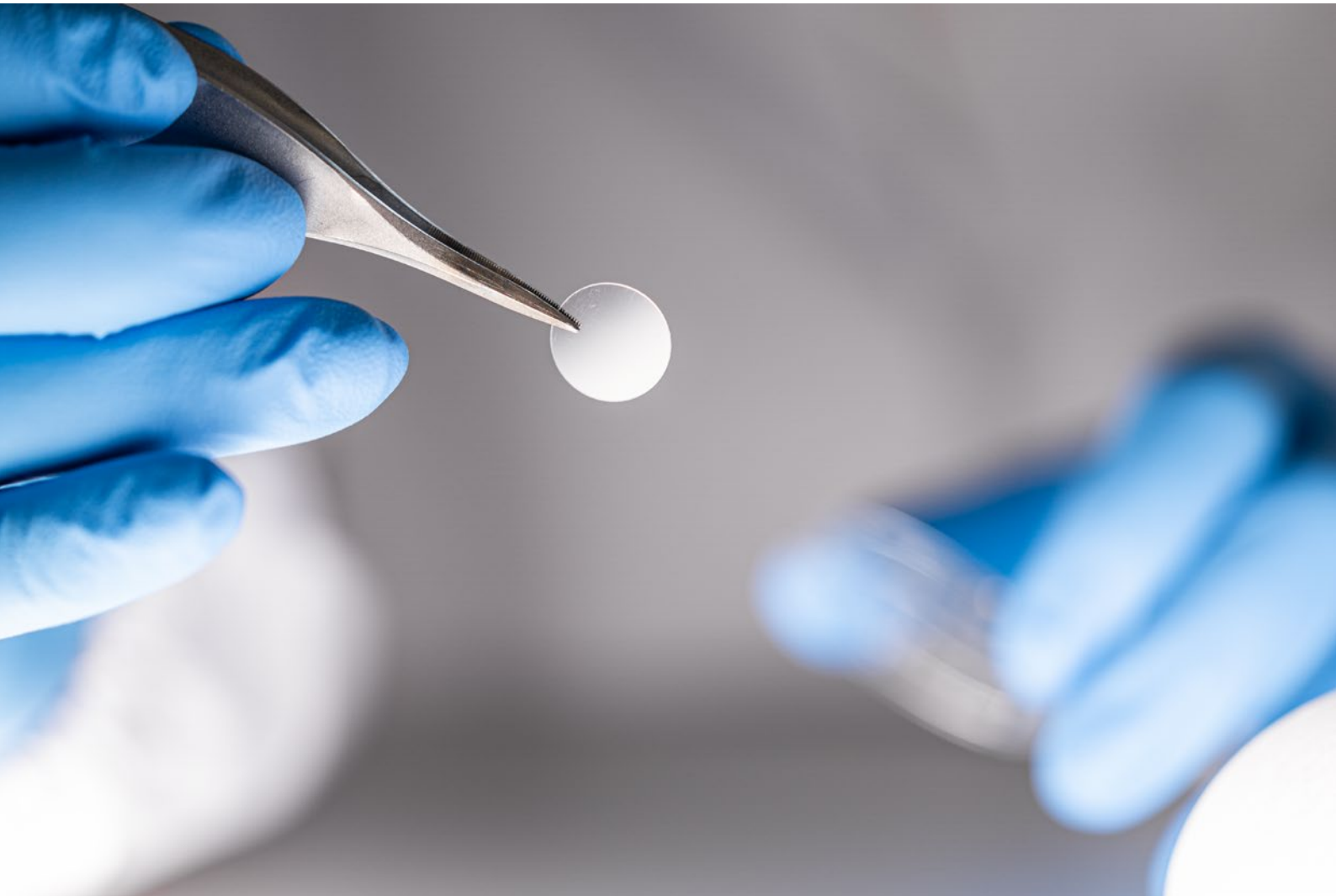
Coverslips for microscopy

Highly transparent coverslips for cell cultivation

Wherever adherent cells need to be cultivated in sterile conditions, fixed, stained and subsequently placed under a microscope on a small surface, SARSTEDT coverslips are your first choice. The double-sided surface treatment and the good optical quality of the modified plastic material make it easy and effective to work with coverslips. All designs are certified as sterile, pyrogen-free/endotoxin-free and non-cytotoxic.

The sterile coverslips can be used in various products for cell cultivation:

Order no.	Description	Color code	Diameter [mm]	Packaging units/box	35 x 10 dish	6-well plate	12-well plate	24-well plate
83.1840	Coverslips		25	200	+	+	–	–
83.1840.001	Coverslips		22	200	+	+	–	–
83.1840.002	Coverslips		13	200	+	+	+	+

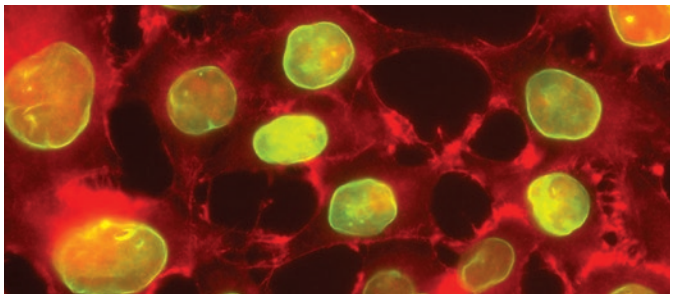


lumox®

lumox® cell culture products are characterized by their thin, gas-permeable film base. Gas permeability and the short diffusion paths ensure optimum gas exchange. The lumox® film base has very low autofluorescence in comparison with conventional polystyrene bases (Fig. 1) and has a higher light transmission in comparison with conventional polystyrene or glass bases (Fig. 2). The minimum autofluorescence and the good light transmission of the lumox® film lead to a consistently high sensitivity in assays and when using imaging and reader technologies. lumox® products enable a range of applications from normal cell culture through to the automated analysis of fluorescence-based cell assays.

lumox®—Benefits at a glance

- Minimal autofluorescence
- High transparency
- Gas-permeable film base
- Optimal growth
- Ideal for microscopic analyses



Cells simply grow better

The gas permeability of the film base of the lumox® products offers numerous advantages. The cells grow directly at the border between the gaseous and the liquid phase, where the culture medium cannot act as a diffusion barrier. Exceptionally short diffusion paths ensure an optimal gas exchange. This means that the cells are directly supplied with oxygen, while also allowing metabolic waste products, such as CO_2, to escape.

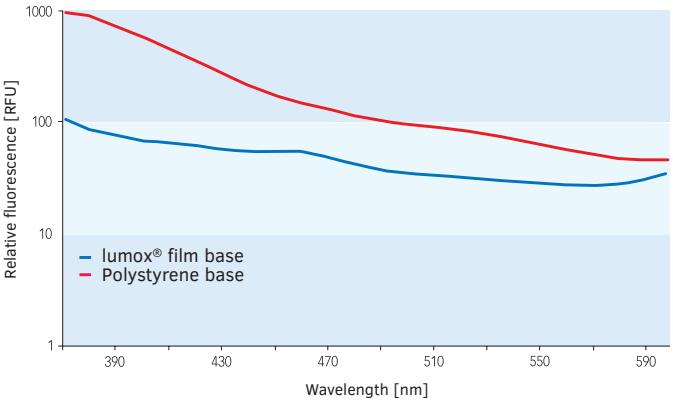


Fig. 1 Fluorescence measurement of the lumox® film and the polystyrene base at 330 nm

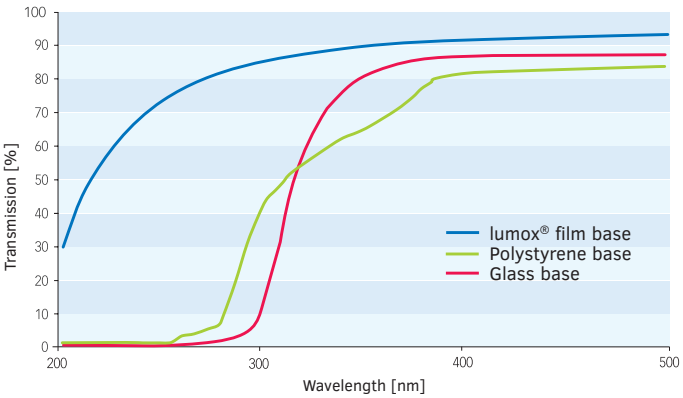


Fig. 2 Light transmission measurement. Detection of low signals, particularly possible with wavelengths of 200–300 nm

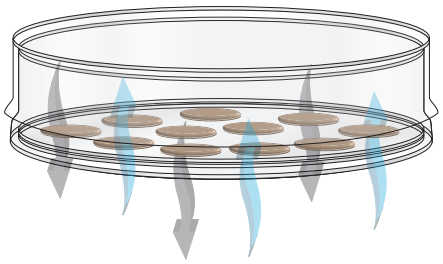


Fig. 3 Gas exchange via the lumox® film base

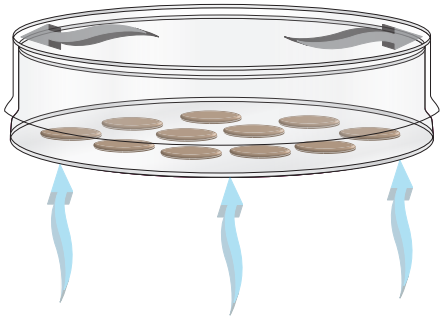
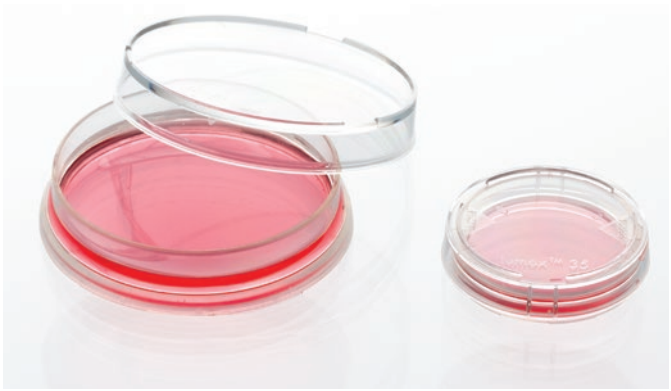


Fig. 4 No gas exchange is possible in conventional cell culture vessels via the polystyrene or glass bases

lumox® dish—The gas-permeable cell culture dish

The lumox® dish consists of a crystal-clear polystyrene cover and a polystyrene frame with a transparent base made of gas-permeable, ultra-thin (25 µm) lumox® film. The lumox® dish is available with a diameter of 35 mm and 50 mm. Both hydrophilic or hydrophobic cultivation surfaces are available, which means that both adherently growing cells and suspension cells can be cultivated in a lumox® dish. For further analyses, such as electron microscopy, the film can be cut out using a scalpel. The lumox® dish is certified as sterile, pyrogen-free/endotoxin-free and non-cytotoxic.



Ordering information—lumox® dish

Order no.	Description	Surface	Dia./height [mm]	Growth surface [cm²]	Working volume [ml]	Packaging inner box/case
94.6077.333	lumox® dish 35		35/6	6.3	2.5	50/250
94.6077.331	lumox® dish 35		35/6	6.3	2.5	50/250
94.6077.305	lumox® dish 50		50/12	20.4	5–10	50/200
94.6077.410	lumox® dish 50		50/12	20.4	5–10	50/200

lumox® multiwell—The multiwell plate with low autofluorescence

lumox® multiwell plates consist of a black polystyrene frame (standard dimensions) with a transparent base made from the thin (50 µm), gas-permeable lumox® film. The 24-well, 96-well and 384-well formats are available for selection. All designs are certified as sterile, pyrogen-free/endotoxin-free and non-cytotoxic.

Ordering information—lumox® multiwell

Order no	Description	Surface	Growth surface per well [cm²]	Working volume per well [µl]	Packaging Bag/box
94.6000.014	lumox® multiwell, 24-well		1.90	500 – 1500	4
94.6110.024	lumox® multiwell, 24-well		1.90	500 – 1500	20
94.6000.024	lumox® multiwell, 96-well		0.34	25 – 340	4
94.6120.096	lumox® multiwell, 96-well		0.34	25 – 340	20
94.6000.034	lumox® multiwell, 384-well		0.11	10 – 130	4
94.6130.384	lumox® multiwell, 384-well		0.11	10 - 130	20

x-well cell culture chambers

The x-well cell culture chambers enable the cultivation and analysis of cells on a slide. Utilizing a polystyrene frame, x-well provide single and multiple-chamber vessels on a variety of slide materials. Irrespective of whether you are performing fluorescence or light microscopy analyses on living or fixed cells, individual examinations or parallel test series, our comprehensive x-well range provides the ideal solutions for your applications. All products are certified as sterile, pyrogen-free/endotoxin-free and non-cytotoxic.

- Time efficient execution of histological and fluorescence staining
- Small compartments for the cost-efficient performance of experiments
- Slides with outstanding optical properties
- Cultivation of adherent cells
- High chemical resistance

x-well PCA—detachable

The slide of the x-well PCA cell culture chambers is made of a plastic from the polyolefin family and has the advantage of a lower autofluorescence and higher chemical resistance in comparison with polystyrene.

- Slide in standard format with writing area
- Low autofluorescence
- Chamber can be detached from the slide without using a tool
- Optimal 400-fold magnification (40x lens)

x-well glass—detachable

The standard format glass slide combines ideal growth conditions for cells with outstanding optical properties. The high chemical resistance also permits the use of most fixatives and dyes.

- Slide in standard format with writing area
- Minimum autofluorescence
- Chamber can be detached from the slide without using a tool
- Optimal 400-fold magnification (40x lens)

x-well coverglass

The x-well coverglass cell culture chambers have a base thickness of 170 µm and are therefore particularly well suited for high-resolution and confocal microscopy.

- Minimum autofluorescence
- Slide in a short format without writing area
- Slide not detachable
- Optimal 1,000-fold magnification (100x lens)

x-well lumox®—detachable

The growth surface of the lumox® x-well specimen slide is made of gas-permeable lumox® film. Due to the outstanding optical properties of the film base, the x-well lumox® are ideal for fluorescence-based cell analyses.

- Slides with thin lumox® film (50 µm) in standard format with writing area
- Minimum autofluorescence and high transparency
- Chamber can be detached from the slide without using a tool
- Optimal 400-fold magnification (40x lens)

Ordering information—x-well

Format	PCA	lumox®	Glass	Coverglass	Growth area [cm²]	Working volume per well [ml]	Packaging blisters/case
1-well	94.6140.102	94.6150.101	94.6170.102	94.6190.102	9	4	6/96
2-well	94.6140.202	94.6150.201	94.6170.202	94.6190.202	4.4	2	6/96
4-well	94.6140.402	94.6150.401	94.6170.402	94.6190.402	1.9	1	6/96
8-well	94.6140.802	94.6150.801	94.6170.802	94.6190.802	0.8	0.5	6/96
Flasche	94.6140.002	-	94.6170.002	94.6190.002	9	4	6/96

flexiPERM®—reusable cell culture insert

flexiPERM® is a reusable silicone insert which subdivides cell culture vessels and slides into smaller cultivation units. The highly adhesive bottom of flexiPERM® sticks to all flat, plain surfaces, such as glass, plastic or lumox® film.

- flexiPERM® are adhesive, reusable silicone cell culture chambers
- flexiPERM® are hydrophobic and not toxic for tissue
- flexiPERM® cell culture inserts are heat resistant (up to 125°C), cold resistant (down to -20°C) and resistant to almost all laboratory chemicals
- Can be sterilized by autoclaving or 70% ethanol
- flexiPERM® are suitable for DIN slides and cell culture dishes
- flexiPERM® cell culture inserts can be used for long-term tests up to 2 weeks

flexiPERM® slide and flexiPERM® micro 12

flexiPERM® slide **(2)** with eight and flexiPERM® micro12 **(1)** with twelve subdivisions are suitable for parallel analyses of cells on DIN slides. In addition, they can be used with or without a slide in combination with quadriPERM®.

flexiPERM® conA and conB

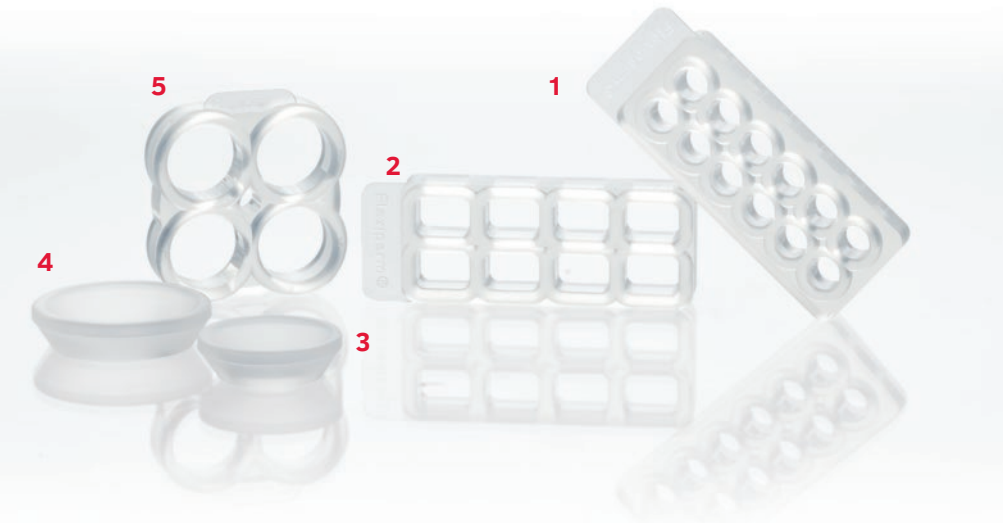
The models flexiPERM® conA **(3)** and flexiPERM® conB **(4)** were developed for special cell examinations in animal and plant physiology.

The cone-shape form can be used for numerous applications in micromanipulation/microinjection. Intracellular and intercellular measurements can be performed in simultaneous microscopic observation.

flexiPERM® disc

The flexiPERM® disc **(5)** which is subdivided into four compartments is the ideal insert for the gas-permeable lumox® dish 50 or any cell culture dish with a diameter of 50 mm.

The flexiPERM® disc can be used for co-cultivation of various cell lines in one vessel.



Ordering information – flexiPERM®

Order no.	Description	Fig.	Culture units	Growth area per sub-division [cm²]	Working volume [µl]	Packaging units/case
94.6011.436	flexiPERM® micro 12	1	12	0.3	100 – 200	5
94.6032.039	flexiPERM® slide	2	8	0.9	300 – 500	5
94.6077.435	flexiPERM® conB	4	1	3.1	2,000 – 3,000	5
94.6077.434	flexiPERM® conA	3	1	1.1	1,000 – 1,500	5
94.6034.067	flexiPERM® disc	5	4	1.8	500 – 1,000	5

quadriPERM®—cell culture dish for parallel analyses

quadriPERM® is a versatile rectangular cell culture dish that is impressive on account of the following benefits:

Cell culture dish for parallel analyses

quadriPERM® has four compartments of identical size for parallel cell cultivation under the same conditions. Suspension cells can be cultivated directly in the quadriPERM®. The x-well products, flexiPERM® or DIN slides can be placed in the compartments for the cultivation of adherent cells

Easy handling

In the quadriPERM®, the cells can be easily and swiftly supplied with new medium. In addition, the external dimensions of a quadriPERM® dish correspond to the ANSI/SLAS (formerly ANSI/SBS) standard, meaning that quadriPERM® dishes, like all SARSTEDT TC plates, can easily be microscopically examined.

Versatile applications

Besides cell cultivation, the quadriPERM® can also be used for a range of different applications. The cell culture dish can be used for in-situ preparations of chromosomes for cytogenetic studies. Fixation and histological, immunocytochemical or immunofluorescence staining are also possible. In addition, quadriPERM® can even be used as a multi-purpose vessel for denaturation, hybridization or membrane washing.

Additional applications include:

- Parallel analyses
- Incubation of slides
- Immunohistology
- Immunocytochemistry
- Fluorescence in-situ hybridization (FISH)
- Cell microarrays
- Mycoplasma tests
- Northern, Southern or Western blot

Certified quality

quadriPERM® dishes are sterile, certified pyrogen-free/ endotoxin-free and non-cytotoxic.

Ordering information—quadriPERM®

Order no.	Description	Cultivation surface per unit [cm²]	Working volume per unit [ml]	Packaging bag/case
94.6077.307	quadriPERM®	24.9	approx. 10	12/48

quadriPERM® in combination with flexiPERM® slide and flexiPERM® micro 12

miniPERM® bioreaktor

The miniPERM® is an easy-to-handle bioreactor, which was developed for the cultivation of eukaryotic cells (mammalian, insect and plant cells) in high density for biomass production as well as for the production of cell products. The sub-division of the bioreactor into production and nutrient modules, together with rotating cultivation, enables the production of highly concentrated cell products in small volumes. Therefore, depending on the cell line, cell densities of more than 10^7 cells/ml and product concentrations of several mg/ml can be achieved. This means that the miniPERM® bioreactor is a cost-effective and time-saving alternative to conventional cell culture devices, roller bottles and fermentation systems.

Advantages of the miniPERM® bioreactor:

- High cell densities
- High product concentrations
- Easy handling
- Multiple harvests
- The production module is available in various sizes

The miniPERM® bioreactors are suitable for a wide range of applications*, such as:

- Cultivation of hybridoma cells for producing antibodies
- Cultivation of transfected cells for producing recombinant proteins or for virus production.
- Biomass products of eukaryotic and prokaryotic cells.

* References:

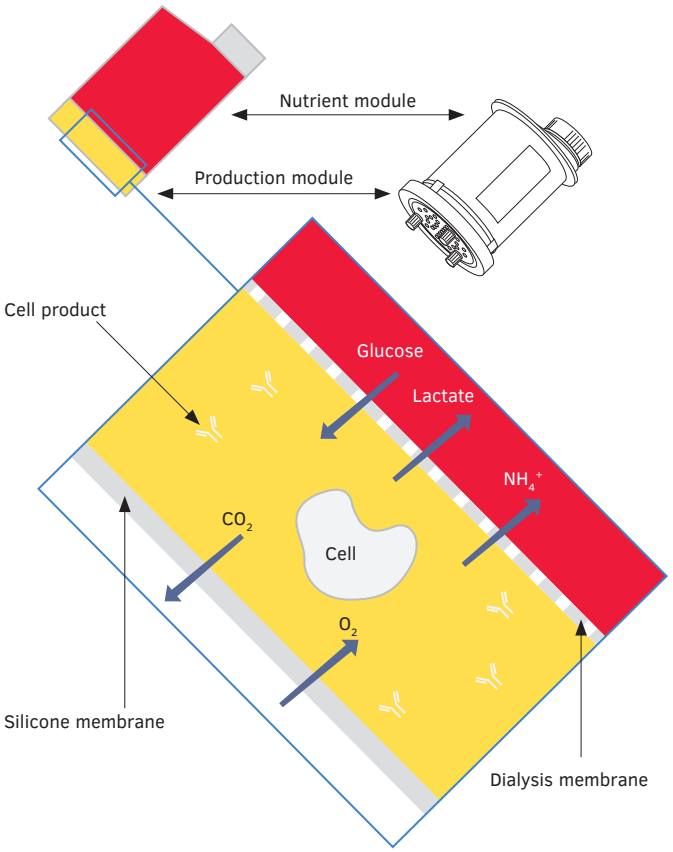
Belin, V., Rousselle, P., Production of a recombinantly expressed laminin fragment by HEK293-EBNA cells cultured in suspension in a dialysis-based bioreactor, Protein Expression & Purification, 48: 43–48 (2006)

Konstantinov, S. et al., Three-Dimensional Bioreactor Cultures: A Useful Dynamic Model for the Study of Cellular Interactions, Ann. N. Y. Acad. Sci. 1030: 103–115 (2004)

Further references and user reports are available upon request.

The principle

The miniPERM® bioreactor is subdivided into a production module and a nutrient module (two-compartment system) by a dialysis membrane. The dialysis membrane has a cut-off size of 12.5 kDa, so that neither cells nor secreted cell products (> 12.5 kDa) can diffuse into the nutrient module. At the same time, the exchange of nutrients and cell metabolites takes place via the dialysis membrane. The gas exchange is effected via a thin, gas-permeable silicone membrane on the outer side of the production module.



miniPERM® production modules

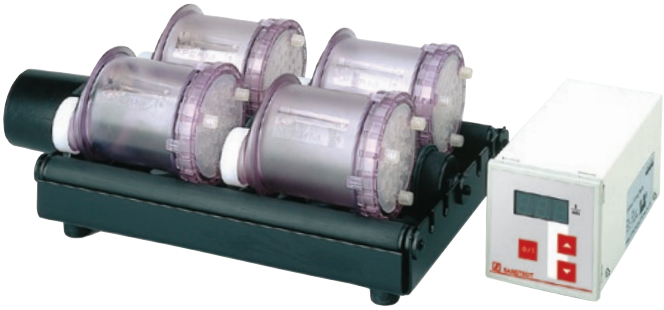
The miniPERM® production modules are suitable for the cultivation of suspension cells. They are available in two different culture volumes depending on the production scale:

- miniPERM® classic, with 35 ml cell culture volume, is the ideal production unit for research laboratories.
- miniPERM® HDC50, with 50 ml culture volume, is suitable for the production of slightly larger protein and biomass amounts.

The universal turning device

To achieve optimal growth conditions in the miniPERM® bioreactor, the cells are kept in suspension using continuous rotation. During cultivation, the miniPERM® bioreactor is rolled lying on its longitudinal axis on a universal turning device in a CO_2 incubator at a minimum of 70% relative humidity.

The universal turning device accommodates up to four miniPERM® bioreactors.



The bioreactor and accessories

miniPERM® bioreactors

- miniPERM® sterile:
  The production and nutrient modules are certified sterile, pyrogen-free/endotoxin-free and non-cytotoxic and are supplied as a single-use bioreactors.
- miniPERM® reusable:
  The nutrient module is autoclavable and designed for multiple use. The production modules are sterile, certified pyrogen-free/endotoxin-free and non-cytotoxic and are available as individually packaged single-use products.

miniPERM® accessories

The following accessories are available for easy handling of the miniPERM® bioreactor:

- miniPERM® stand
- Sterile screw caps for the modules
- Sterile filling tube

miniPERM® start-up support kit

This kit contains all the accessories required for starting the culture, sampling and harvesting.

Ordering information—miniPERM®

Order no.	Description		Packaging units/box
94.6001.059	miniPERM® classic	Bioreactor, sterile	2
94.6001.055	miniPERM® classic	Production module, sterile	4
94.6077.121	miniPERM® HDC 50	Bioreactor, sterile	2
94.6077.017	miniPERM® HDC 50	Production module, sterile	4

Ordering information—accessories

Order no.	Description		Packaging units/box
94.6001.153	Nutrient module for miniPERM®, autoclavable		4
94.6001.054	Stands for miniPERM®		4
94.6001.036	Screw caps for production module, sterile		6
94.6077.037	Screw cap for nutrient module, sterile		16
94.6077.138	Filling tube 5“, Luer, sterile		50
94.6001.094	Start-up support kit	Quantity	1
	• Single use 50 ml Luer lock syringe, sterile	8	
	• Single use 2 ml Luer syringe, sterile	20	
	• Filling tube 5“, Luer, sterile	8	
	• Luer needle, 25G x 5/8“, sterile	20	
	• Septum seal, sterile	6	
	• Stand for miniPERM®	1	

Ordering information—universal turning device

Order no.	Description	Packaging units/box
94.6001.061	Universal Turning Device 115/230 V	1

CryoPure freezing system

SARSTEDT's CryoPure vessels for vital preservation are tested and certified for the protection of the cell material (see also p. 2):

- **Sterile**
  Based on ISO 11137
- **Pyrogen-free/endotoxin-free**
  <0,06 EU/ml
- **Non-cytotoxic**
  In compliance with ISO 10993-5
- **Non-mutagenic**
  Proof of assessment of mutagen-free status was conducted according to Ames Test II
- **DNA-free**
  Human DNA <0.5 pg/µl, bacterial DNA <0.02 pg/µl
- **DNase/RNase-free**
  DNase <$1x10^{-5}$ U/µl, RNase <$1x10^{-9}$ Kunitz units/µl
- CE IVD

Cryo Performance Tested
CE/ IVD/ Sterile/ Pyrogen-/ DNA-/ DNase-/ RNase-free/ non-cytotoxic/ non-mutagenic
CERTIFIED

For the storage of cell materials and their components at temperatures as low as –196°C, SARSTEDT offers a professional storage system with a wide range of highly transparent CryoPure tube products.

Versatile design

- CryoPure tubes with **external thread** and a volume of 1.2 ml to 5 ml in order to reduce the risk of contamination. **(1)**
- For more compact storage (10x10 format), we offer a 2ml CryoPure tube with an **internal thread** and silicone O-ring cap. **(1)**

Inspirationally ergonomics

The QuickSeal sealing mechanism enables ergonomic and secure opening and closing of both types of cap with just one turn. **(2)**

Color-coding

The combination of 6 different cap colors with 6 different cap insert colors provides up to 36 color-coding options for visual coding and easy sample identification.

Optimum design

- The optimum internal contour of the base of the CryoPure tube enables easy removal of the complete sample. **(3)**
- Free-standing design.
- The skirted base of the CryoPure tubes allows for convenient single-hand handling of the tubes in the CryoRack 40 and most other racks. **(4)**


1


2


3

4

CryoPure 1.2 ml tubes with external thread

Order no	Screw cap	Nominal volume	Packaging	
72.377	White	1.0 ml	50/bag 500/inner box 2,000/box	
72.377.002	Red	1.0 ml		
72.377.004	Yellow	1.0 ml		
72.377.005	Green	1.0 ml		
72.377.007	Violet	1.0 ml		
72.377.992	Color mix	1.0 ml		

CryoPure 2.0 ml tubes with external thread

72.379	White	1.8 ml	50/bag 500/inner box 2,000/box	
72.379.002	Red	1.8 ml		
72.379.004	Yellow	1.8 ml		
72.379.005	Green	1.8 ml		
72.379.006	Blue	1.8 ml		
72.379.007	Violet	1.8 ml		
72.379.992	Color mix	1.8 ml		

CryoPure 5.0 ml tubes with external thread

72.383	White	4.5 ml	25/bag 250/inner box 1,000/box	
72.383.002	Red	4.5 ml		
72.383.004	Yellow	4.5 ml		
72.383.005	Green	4.5 ml		
72.383.007	Violet	4.5 ml		
72.383.992	Color mix	4.5 ml		

CryoPure 2.0 ml tubes with internal thread and silicone O-ring

72.380	White	1.6 ml	50/bag 500/inner box 2,000/box	
72.380.002	Red	1.6 ml		
72.380.004	Yellow	1.6 ml		
72.380.005	Green	1.6 ml		
72.380.006	Blue	1.6 ml		
72.380.007	Violet	1.6 ml		
72.380.992	Color mix	1.6 ml		

Ordering information—Color-coding inserts for CryoPure tubes

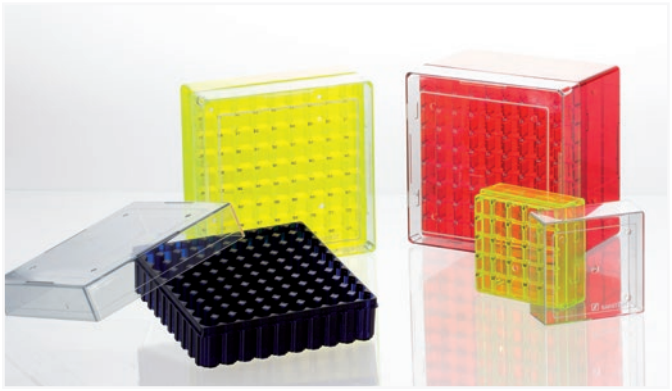
Order no	Color	Packaging
65.386	White	100/bag · 3,000/box
65.386.002	Red	100/bag · 3,000/box
65.386.004	Yellow	100/bag · 3,000/box
65.386.005	Green	100/bag · 3,000/box
65.386.006	Blue	100/bag · 3,000/box
65.386.007	Violet	100/bag · 3,000/box
65.386.992	Color mix	100/bag · 5 colors · 2,500/box

CryoRack 40/work rack

- 4x10 format accommodates 40 CryoPure tubes
- Interlocking connection with tube bases provides easy single-handed operation
- Alphanumeric coding for easy sample assignment
- Slip-proof rubber feet

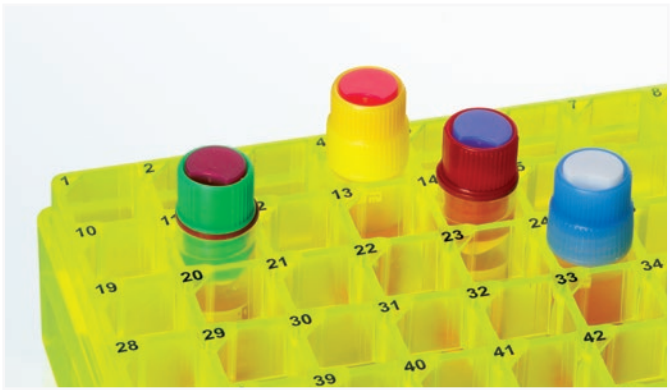
Ordering information—CryoRack 40

Order no	Packaging
93.856.040	1/bag · 10/box



Cryo boxes for low-temperature storage

- High-quality polycarbonate storage boxes for storage at temperatures down to -196°C
- Numerical coding for each tube in the box enables quick sample identification
- Crystal clear lid and colored base with large apertures for quick ventilation
- Full range of box designs for customary 1.2/2.0 and 5.0 ml CryoPure tubes
- Flexible storage capacities with box formats 5 x 5, 9 x 9 and 10 x 10
- Autoclavable (121 °C, 20 min.)



Dimensions

Suitable for cryo tubeas	1.2 – 2.0 ml	1.2 – 2.0 ml	1.2 – 2.0 ml	3.5 – 5.0 ml
Format	5 x 5	9 x 9	10 x 10	9 x 9
Storage capacity	25	81	100	81
Box size (W x D x H) in mm	75 x 75 x 52	132 x 132 x 53	132 x 132 x 53	132 x 132 x 95
Ideal for tubes with	Internal and external thread		Internal thread	Internal and external thread

Ordering information—cryo boxes

Packaging	Color	Ordering code			
5/bag · 20/box		93.872.225	93.873.281	93.874.210	93.875.281
5/bag · 20/box		93.872.425	93.873.481	93.874.410	93.875.481
5/bag · 20/box		93.872.625	93.873.681	93.874.610	93.875.681

Cell strainers

The SARSTEDT cell strainers provide an innovative, fast and easy-to-handle solution for producing single-cell suspensions (primary cell cultures, flow cytometry). They have a high-quality nylon strainer and are available in 40, 70 and 100 µm pore sizes.

Product characteristics of SARSTEDT cell strainers

The following characteristics simplify work processes and reduce the risk of contamination:

- Color codes for quick identification of the pore size— 40 µm (blue), 70 µm (white) and 100 µm (yellow). **(1)**
- The cell strainers are individually packed in sterile blister packaging and can be conveniently removed thanks to the sturdy frame with molded grip. This minimizes the risk of inadvertently coming into contact with the filter. **(2)**
- Four supports along the edge ensure continuous ventilation during filtration. This minimizes the risk of sample overflow from the 'air lock' effect. **(3)**
- The cell strainers are stackable. This enables the multi-stage filtration of cell suspensions, e.g. after organ digestion or the production of primary cells. **(4)**
- The cell strainers are compatible with conventional 50 ml centrifuge tubes. **(5)**
- The adapter enables their use with a range of other tubes with smaller diameters (15 ml, 5 ml, Ø 17 x 100 mm, Ø 12 x 75 mm FACS tubes). **(6)**
- Cell strainers and adapters are certified as sterile, pyrogen-free/endotoxin-free and non-cytotoxic.

Ordering information – Zellsiebe

Order no.	Description	Pore size [µm]	Color code	Packaging blisters/case
83.3945.040	Cell strainer, sterile	40		1 / 50
83.3945.070	Cell strainer, sterile	70		1 / 50
83.3945.100	Cell strainer, sterile	100		1 / 50
83.3945.999	Adaptor for cell strainers	–	–	1 / 25

Filtropur V, Filtropur BT

The Filtropur product range is suitable for the filtration of aqueous solutions (e.g. cell culture medium) and includes filtration units for the most wide-ranging volumes. The filter membranes are available with different pore sizes and can therefore be used for a wide range of applications. The Filtropur product range is characterized by its variability, cost efficiency and high throughput:

Filtropur V and Filtropur BT vacuum filtration

Filtropur V and Filtropur BT were mainly developed for applications in the field of cell culture and are equipped with polyether sulfone (PES) membrane filters. These products are therefore ideal for the cold sterilization of cell culture media and aqueous protein solutions.

- Filtropur V and Filtropur BT are available with three pore sizes (0.45 µm, 0.2 µm and 0.1 µm).
- The 0.1 µm PES-membrane is used for the effective prevention and removal of mycoplasmas from solutions.
- Ergonomically shaped, stable, sterile receiver bottles are available for volumes of 250 ml to 1,000 ml.
- The PES membrane enables a high throughput while simultaneously reducing the filtration time and is characterized by its low protein adsorption.
- Filtropur V and Filtropur BT are certified as sterile, pyrogen-free/endotoxin-free and non-cytotoxic.

Vacuum filtration units*

	Order no.	Description	Filtration volume [ml]	Ø membrane [mm]	Membrane/ pore size	Packaging bag/case
	83.3940.501	Filtropur V 25	250	50	PES/0,22 µm	1/12
	83.3941.500	Filtropur V 50	500	75	PES/0,45 µm	1/12
	83.3941.501	Filtropur V 50	500	75	PES/0,22 µm	1/12
	83.3941.502	Filtropur V 50	500	75	PES/0,1 µm	1/12
	83.3942.500	Filtropur V 100	1.000	91	PES/0,45 µm	1/12
	83.3942.501	Filtropur V 100	1.000	91	PES/0,22 µm	1/12

* Each filtration unit has a screw cap in sterile packaging for the collection vessel.

Flask top filter for storage vessels, outside diameter 45 mm max.

	Order no.	Description	Filtration volume [ml]	Ø membrane [mm]	Membrane/ pore size	Packaging bag/case
	83.3940.511	Filtropur BT 25	250	50	PES/0,22 µm	1/24
	83.3941.510	Filtropur BT 50	500	75	PES/0,45 µm	1/24
	83.3941.511	Filtropur BT 50	500	75	PES/0,22 µm	1/24

Filtration collection vessels for Filtropur

	Order no.	Description	Filtration volume [ml]	Design	Packaging bag/case
	83.3940.505	Auffanggefäß für Filtropur	250	Mit aufgeschraubtem Deckel	1/24
	83.3941.505		500	Mit aufgeschraubtem Deckel	1/24
	83.3942.505		1.000	Mit aufgeschraubtem Deckel	1/24

Filtropur S, Filtropur S plus and Filtropur L

Filtropur S, Filtropur S plus and Filtropur L

Filtropur S, Filtropur S plus and Filtropur L are suitable for filtering aqueous solutions and are characterized by the following properties:

- Low protein adsorption and high flow rate
- Low hold up volume
- Sterile, pyrogen-free/endotoxin-free and non-cytotoxic
- Biocompatibility due to GF pre-filter-, 100% free from binding agents and membranes that are 100% free of wetting agents

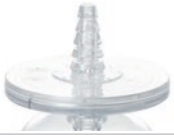
Filtropur S and Filtropur S plus

The Filtropur S and Filtropur S plus syringe filters are often used for the sterile filtration of cell culture media, cell culture additives and buffers, as they reliably remove microorganisms and particles from the solutions that need to be filtered. The syringe filters are available with a pore size of 0.2 µm and 0.45 µm.

Filtropur L

The ready-to-use Filtropur L products have a polyethersulfone (PES) membrane with an integrated glass fiber (GF) pre-filter. Filtropur L, when combined with a membrane pump, is suitable for the quick sterile filtration of cell culture media and aqueous solutions with a volume of up to 10 l. Filtropur L filters are optionally available with a Luer lock or a tube connector.

Ordering information—Filtropur

	Order no.	Description	Application	Ø membrane [mm]	Membrane/ pore size	Packaging bag/case
	83.1826	Filtropur S 0.45 syringe filters	Ultra-purification/ clear filtration	28	PES / 0,45 µm	1/50, sterile
	83.1826.001	Filtropur S 0.2 syringe filters	Sterile filtration	28	PES / 0,2 µm	1/50, sterile
	83.1826.102	Filtropur S plus 0.2 syringe filters	Sterile filtration/to increase the total filtration volume	28	CA/GF / 0,2 µm	1/50, sterile
	83.3944	Filtropur L 0.2 S* Inlet: Tube connector	Sterile filtration	64	PES/GF / 0,2 µm	1/50, sterile
	83.3944.001	Filtropur L 0.2 LS* Inlet: Luer lock	Sterile filtration	64	PES/GF / 0,2 µm	1/50, sterile

*Zur Druckfiltration

Ordering information—accessories

Order number	Description	Packaging
83.1850	Diaphragm pump with tube set, stainless steel sinker and tube adaptor for Filtropur L	1/box

Serological pipettes Automatic-Sarpette®

Serological pipettes

- Manufactured from crystal-clear polystyrene
- Larger pipetting volume due to negative graduations
- Variable working method due to reverse scaling
- Optimized filter end for universal fit in the most common pipetting aids
- Guide ribs on the mouthpiece of the 25 ml pipettes ensure a secure fit in the retaining adapter of pipetting aids
- Simple volume identification with international color code on each individual blister pack
- Easy, peel-open, anti-static packaging
- Available in individual sterile* packaging or in a bag of 25 units

* Individually packaged pipettes are sterile and certified pyrogen-free/endotoxin-free and non-cytotoxic.

Ordering information—serological pipettes 1 ml, 2 ml, 5 ml, 10 ml, 25 ml, 50 ml

Order no.	Total volume/graduation		Description	Color code	Packaging units/case
86.1251.001	1 ml	1/100 ml	Plugged, ind. wrapped sterile		100/1,000
86.1251.025	1 ml	1/100 ml	Plugged, sterile, in 25 units		25/1,000
86.1252.001	2 ml	1/100 ml	Plugged, ind. wrapped sterile		100/1,000
86.1252.025	2 ml	1/100 ml	Plugged, sterile, in 25 units		25/1,000
86.1253.001	5 ml	1/10 ml	Plugged, ind. wrapped sterile		50/500
86.1253.025	5 ml	1/10 ml	Plugged, sterile, in 25 units		25/500
86.1254.001	10 ml	1/10 ml	Plugged, ind. wrapped sterile		50/500
86.1254.025	10 ml	1/10 ml	Plugged, sterile, in 25 units		25/500
86.1685.001	25 ml	2/10 ml	Plugged, ind. wrapped sterile		25/200
86.1685.020	25 ml	2/10 ml	Plugged, sterile, in 20 units		20/200
86.1256.001	50 ml	1/2 ml	Plugged, ind. wrapped sterile		30/90

Aspiration pipette, polystyrene

- For aspirating liquids using a vacuum pump
- Individually packaged in sterile paper/plastic peel packaging
- Pyrogen-free/endotoxin-free and non-cytotoxic
- Without print, without cotton plugs

Ordering information, aspiration pipette

Order no	Total volume/graduation	Design	Packaging units/case
86.1252.011	2 ml/without graduation	Without plug and print, ind. wrapped, sterile	1/1,000

Automatic-Sarpette®

The ergonomically designed SARSTEDT Automatic-Sarpette® enables convenient and fatigue-free work even with prolonged pipetting.

- Ergonomic design and optimal weight distribution
- One-handed operation for convenient use
- Users can choose from three different pump speeds
- Precise and responsive control of filling and dispensing speed using two pipetting triggers
- All plastic and glass pipettes fit perfectly thanks to silicon pipette holder with graduated steps
- A 50 ml pipette can be filled in under 10 seconds at maximum motor power
- Low-noise pump motor for pleasant work
- NiMH battery with a service life of up to 8 hours
- LED display for monitoring battery charge

Ordering information—Automatic-Sarpette®

Order no.	Description	Packaging
90.189.203	Automatic-Sarpette® incl. US charger, table stand, wall bracket, 2 replacement filters (0.45 µm and 0.20 µm)	1 unit/box
90.189.220	Replacement filter for Automatic-Sarpette®, pore size: 0.45 µm	5 pieces/bag
90.189.221	Replacement filter for Automatic-Sarpette®, pore size: 0.2 µm	5 pieces/bag
90.189.222	Silicone adaptor for Automatic Sarpette®	1 piece/bag
90.189.223	Replacement batteries for Automatic-Sarpette®	2 pieces/bag

Conical tubes, 15 ml and 50 ml volume, sterile

- Exceptionally clear polypropylene (PP) enables unrestricted inspection of the sample material
- Printed graduations and writing space
- Graduations and writing space are resistant to ethanol and methanol
- Can be centrifuged up to 20,000 x g* (Exception: 62.559.205 up to 8,000 x g)
- Sterile, pyrogen-free/endotoxin-free, non-cytotoxic

Order no.	Volume [ml]	Length [mm]	Diameter [mm]	Version	Packaging bag/case
62.559.001	50	115	28	With skirted base, red cap assembled	25/300
62.547.004	50	114	28	Red cap writing space	25/polystyrene rack/300
62.547.254	50	114	28	Red cap writing space	25/300
62.554.002	15	120	17	Red cap writing space	50/polystyrene rack/500
62.554.502	15	120	17	Red cap writing space	50/500

* For liquid density of 1.06 g/ml and centrifugal inserts which are adapted to the conical tube base, tested at 20°C, for 30 minutes.

Cell culture tubes, crystal-clear PS, sterile

The pretreated polystyrene tubes with screw cap are particularly suitable for:

- Cultivation of small cell populations
- Cultivation of suspension or monolayer cultures
- The screw cap allows even aspiration and a gas-tight sealing of the cells

Order no.	Volume [ml]	Length [mm]	Diameter [mm]	Version	Packaging bag/case
83.9923.945	15	125	16	Red cap, TC-treated	5/1,000
83.9923.943	12	99	16	Red cap, TC-treated	5/1,000
83.9923.929	10	97	16	Red cap with skirted conical base, TC-treated	5/1,000

Tubes with two-position closure, sterile

The ventilation plug has a two-position closure. The first position (plug lightly fitted) enables ventilation of the inside of the tube. When securely pressed down, the plug tightly seals the tube in the second position.

Order no.	Volume	Length	Diameter	Version	Packaging bag/case
55.526.006 PP	5 ml	75 mm	12 mm	Without print	25/1,000
55.476.013 PS	5 ml	75 mm	12 mm	Without print	25/1,000
62.526.028 PP	5 ml	75 mm	12 mm	Printed graduation	ind. wrapped, sterile, 500/box
62.476.028 PS	5 ml	75 mm	12 mm	Printed graduation	ind. wrapped, sterile, 500/box
62.515.006 PP	13 ml	100 mm	16 mm	Printed graduation	25/500
62.515.028 PP	13 ml	100 mm	16 mm	Printed graduation	ind. wrapped, sterile, 500/box

For further information on our tube range refer to our „Tube Finder“ at www.sarstedt.com.

If you have any questions:
We'd be happy to help!

Visit our website:
www.sarstedt.com

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