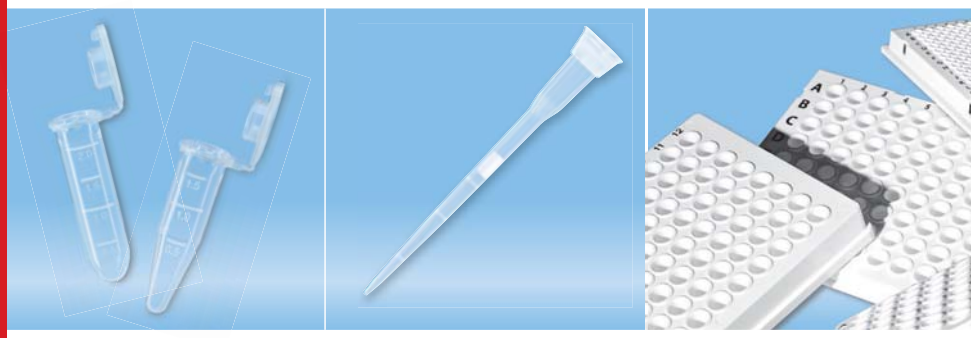
PCR & Molecular Biology

Certified Products for Applications in PCR,
Molecular Biology & Research

PCR
Performance Tested
DNA-/ DNase-/ RNase-/
PCR inhibitor-free
CERTIFIED

Biosphere® plus
Sterile / DNA-/ DNase-/
RNase-/ PCR inhibitor-/
ATP-/ Pyrogen-free
CERTIFIED

Liquid Handling



SARSTEDT

PCR and Molecular Biology

In the field of PCR and molecular biology, the demands on all working materials and consumables are particularly high. It is only possible to achieve valuable, reproducible results if the precision and reliability of all materials is ensured.

Our PCR and liquid handling products are produced under strictly regulated conditions to provide you with the guarantees that you need in research and development, offering flexible solutions for all fields of application.

On the following pages we provide an overview of our PCR and molecular biology range so you can find the right tools and solutions for your requirements.

Your Sarstedt Team

SARSTEDT

SARSTEDT

Sarstedt quality symbols for laboratory products

Cleanroom conditions, skilled personnel in protective clothing as well as automated processes form the basic prerequisites for award of the certified Sarstedt quality standards, PCR Performance Tested and Biosphere® plus.

Since 1995, we have provided our customers with a product quality tailored to their specific applications to ensure utmost reproducibility in their analyses. Our certification standards are continually adjusted to keep up with the state of research so that we can provide you with the required level of purity in your routine work at all times.

PCR Performance Tested Quality • The Sarstedt quality and purity standard

PCR Performance Tested is tailored to accommodate the specific requirements and needs involved in working with nucleic acids (e.g. qPCR, PCR, purification and storage). Thanks to this quality grade, customers can use Sarstedt disposables directly in nucleic acid analytics with confidence.

PCR Performance Tested products meet the following purity criteria, which are certified by an independent laboratory:

✓ **DNA-free** ✓ **DNase/RNase-free** ✓ **PCR inhibitor-free**

We guarantee that the following limit values are not exceeded:

Human DNA < 0.5 pg/µl · Bacterial DNA < 0.02 pg/µl · DNase < 1x10^{-5} U/µl
RNase < 1x10^{-9} Kunitz units/µl

Technical modifications reserved

Biosphere® plus quality • Unrivalled purity

Scientific analysis methods have been continuously refined to the point where it is now even possible to identify individual molecules.
As sensitivity increases, disposables are required to meet significantly more exacting requirements so that users can be certain that even the smallest contamination will be reliably excluded.
The Biosphere® plus quality constitutes a purity standard that enables utmost protection against any possible contamination.
In addition to our high-purity production conditions, all products certified Biosphere® plus are subjected to a validated decontamination process to ensure that the relevant values are significantly lower than the thresholds guaranteed for the PCR Performance Tested quality. Biosphere® plus products are also ATP-free and non-pyrogenic / endotoxin-free, and are sterile in accordance with ISO 11135.

Biosphere® plus products meet the following purity criteria, which are certified by an independent laboratory:

✓ **Sterile** ✓ **DNA-free** ✓ **DNase/RNase-free**
✓ **PCR inhibitor-free** ✓ **ATP-free** ✓ **Non-pyrogenic / endotoxin-free**

We guarantee that the following limit values are not exceeded:

Human DNA < 5.0 fg/µl · Bacterial DNA < 0.2 fg/µl · DNase < 5x10^{-7} U/µl
RNase < 5x10^{-11} Kunitz units/µl · ATP < 1x10^{-12} mmol/µl · Pyrogens < 0.002 EU/ml
Sterility validated in accordance with ISO 11135

Technical modifications reserved

SARSTEDT

The pipette tip – a critical factor in precise dosing

Calibrated system: pipettes and pipette tips

The accuracy of the pipetting process depends to a large extent on the perfect coordination of pipette and pipette tip.

- As one of the leading manufacturers of pipette tips for decades, Sarstedt aims to provide its customers with reliable quality tips to fit the key pipette brands.
- The quality of a pipette tip is defined by the properties of the material used (e.g. chemical resistance), its design (e.g. graduation rings, reduced aerosol formation), and by accuracy of fit with the corresponding pipette.

Our quality guarantee: Conformity testing in accordance with the international test standard ISO 8655-2

The trend to ever smaller sample volumes leads to increasingly higher requirements on the consumables. To guarantee you maximum precision and reliability even with very small volumes, Sarstedt tips are regularly checked in combination with the pipettes of market-leading manufacturers. They undergo comprehensive conformity testing under a specified process, according to the international ISO 8655-2 standard for piston pipettes. We guarantee that our pipette tips form a system with the piston pipettes listed from the specified manufacturers, that does not exceed the accuracy and precision tolerances of ISO 8655-2.

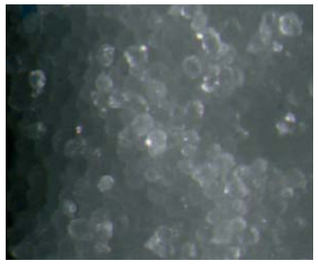
- The declaration of conformity for piston pipettes indicates which combination of pipette and pipette tip it applies to, and serves as a guarantee of precision and reliability.
- Look for the logo below to determine whether there is a standard declaration of conformity available for the pipette/pipette tip combination in question.

DE-M

SARSTEDT

Prevention of contamination and carryover

Even the most careful pipetting may generate aerosols that can make their way into the pipette and contaminate it. The highly sensitive PCR method, like microbiological and radioactive pipetting procedures, cannot tolerate contamination of the pipette. To eliminate the problem of aerosol contamination and the associated consequences (erroneous results, additional work and extra costs), pipette tips are used which incorporate special porous filter elements.



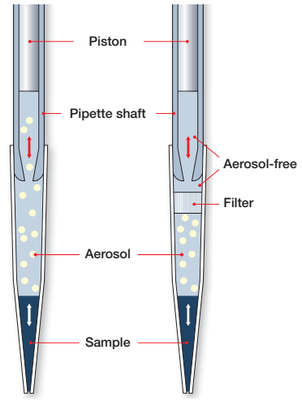
Cross-section of a porous filter element (40x magnification)

Reliable protection with selected filter materials

The filter elements positioned in the pipette tips consist of a porous synthetic material that has particular hydrophobic properties, and no self-sealing additives.

- The sponge-like material is densely composed of randomly arranged channels (see image at left) which allow air to pass through as necessary to enable the required precision when using piston pipettes.
- The complex structure of the porous filter effectively prevents aerosols from entering the pipette shaft.

Biosphere® plus filter tips



Measuring the effectiveness of filter inserts in Biosphere® plus filter tips*

PCR and indirect radioactive measurement of plasmid DNA using P-32-labelled ATP are two conclusive methods for measuring any cross-contamination of pipettes by DNA aerosols that may occur during use.

- With both methods the hydrophobic filter inserts used in Sarstedt Biosphere® plus pipette tips in conjunction with the selected porosity were proven to provide the required level of protection against aerosol contamination.
- The high degree of effectiveness of the filters in Biosphere® plus filter tips is achieved through a complex interplay between absorption, surface quality, thickness, rigidity and shape.

**Further details can be found in our application report 'Shielding effect of filter inserts in pipette tips'*

Additional protection with Biosphere® plus purity standard

- Maximum biological purity thanks to our controlled manufacturing process: free of DNA, DNase, RNase, PCR inhibitors, ATP and pyrogens
- Batch-specific certificates available

Convenient and protective packaging of individual tip boxes

- Each tip box is aseptically packaged in a special sterile bag in order to ensure additional protection.
- The bags can be easily opened by tearing at the grooved edge (see image).

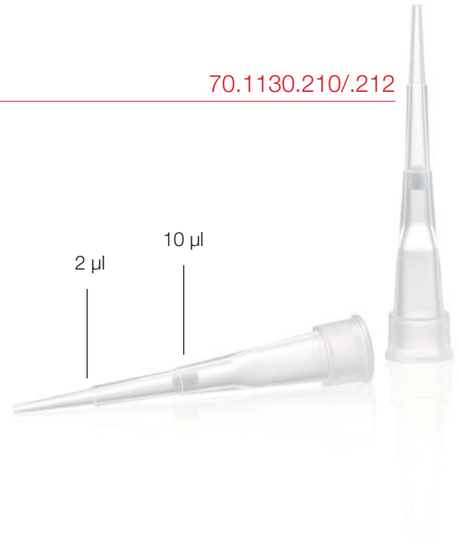
Tailored tip solutions for every application

The use of micro-volumes in modern laboratory practice means that dosing systems consisting of a pipette and pipette tip are subject to extremely stringent requirements.
This is why Sarstedt pipette tips feature the following quality characteristics:

- Greater pipette reliability thanks to conformance testing in accordance with ISO 8655-2
- Easier volume control – calibration rings make it easier to see how much liquid is in the tip
- Improved dosing – thin extended tips enable visual monitoring of the volume
- Color-coded trays enable easy identification of tip volume
- Visual pipetting control due to highly transparent tip material

Filter tip • 0.1 - 10 µl / 0.1 - 2.5 µl — DE-M — 70.1130.210/.212

- Short, 31 mm-long tip for even the smallest volumes
- Calibration rings at 2 and 10 µl
- Conformity tested in accordance with ISO 8655-2
- Color code

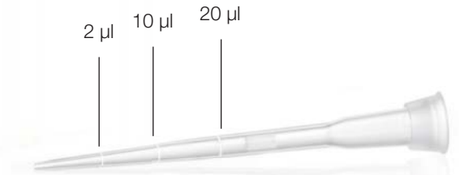


Filter tip • 0.1 - 20 µl — DE-M — 70.1116.210

- Thin extended 46 mm-long tip
- Calibration rings at 2 µl, 10 µl and 20 µl
- Ideally suited to pipetting into micro tubes, screw cap micro tubes and other tall, thin vessels
- Conformity tested in accordance with ISO 8655-2
- Color code

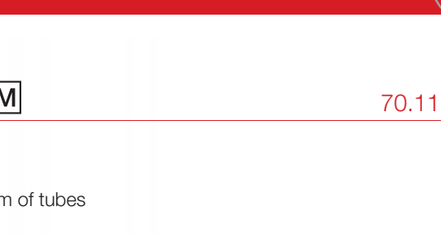
Filter tip • 0.1 - 20 µl — DE-M — 70.1114.210

- Ergonomically designed and flexible tip cone
- Fits perfectly onto single and multi-channel pipettes
- 46 mm tip length makes it easier to pipette reliably into the bottom of tubes
- Calibration rings at 2 µl, 10 µl and 20 µl
- Improved dosing of small volumes thanks to narrow, extended tip
- Conformity tested in accordance with ISO 8655-2
- Color code



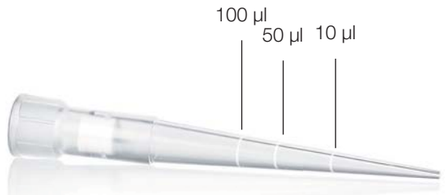
Filter tip • 2 - 100 µl — DE-M — 70.760.212 / .213

- 51 mm long universal tip
- Two filter position options limit the volume to 20 µl or 100 µl and reduces aerosol formation
- Conformity tested in accordance with ISO 8655-2
- Color code



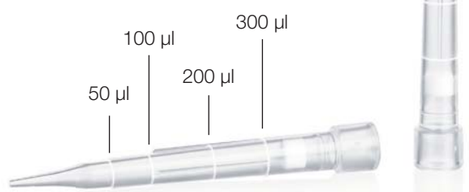
Filter tip • 2 - 200 µl — DE-M — 70.760.211

- 51 mm-long universal tip for all volumes up to 200 µl
- Conformity tested in accordance with ISO 8655-2
- Color code



Filter tip • 10 - 300 µl DE-M 70.765.210

- 56 mm-long tip, specially designed for multi-channel pipettes
- Calibration rings at 50 µl, 100 µl, 200 µl and 300 µl
- Conformity tested in accordance with ISO 8655-2
- Color code

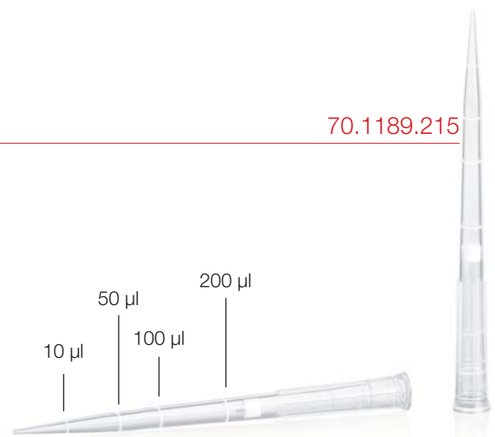


Gelloader pipette tip • 1 - 200 µl 70.1190.100

- 66 mm long, finely drawn-out capillary
- Easy to fill agarose or SDS gels
- Compatible with the most common pipettes

Filter tip • 1 - 200 µl 70.1189.215

- Extra long and slim 200 µl tip
- Soft, flexible cone for easy attachment and simple disposal
- 77 mm-length for use with tubes
- Calibration rings at 10 µl, 50 µl, 100 µl and 200 µl
- Color code

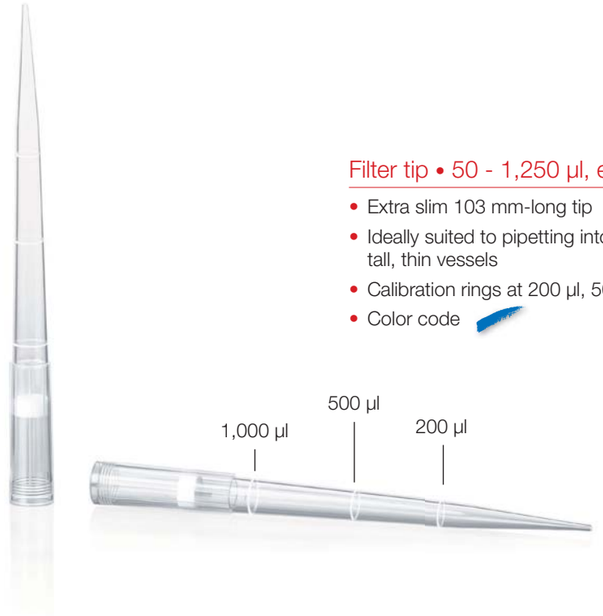


Filter tip • 50 - 1,000 µl DE-M 70.762.211

- 72 mm tip for volumes up to 1 ml
- Calibration rings at 100 µl, 500 µl and 1,000 µl
- Conformity tested against ISO 8655-2
- Color code

Filter tip • 50 - 1,250 µl, extra long 70.1186.210

- Extra slim 103 mm-long tip
- Ideally suited to pipetting into the Deep Well MegaBlock®, 5 ml CryoPure tubes and other tall, thin vessels
- Calibration rings at 200 µl, 500 µl and 1,000 µl
- Color code



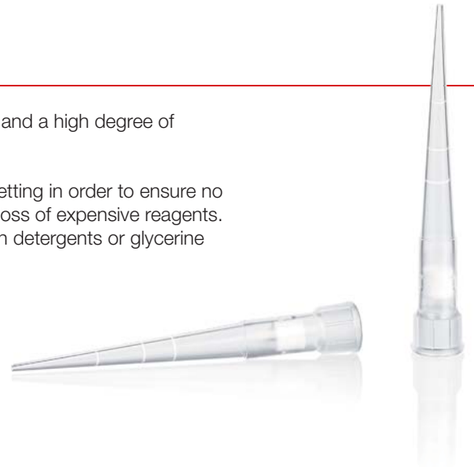
Tip:
to easily identify which tip is suitable for your pipette, use the compatibility table on pages 18-21or at www.sarstedt.com

Low retention pipette tips – pipetting without losses

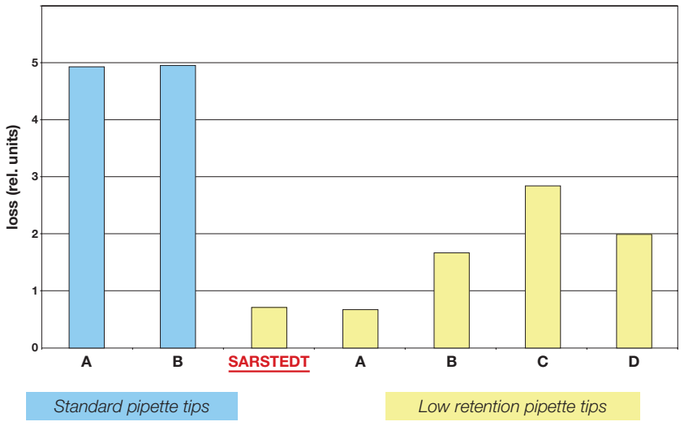
Low retention surface for improved flow characteristics

Laboratory analysis methods are becoming increasingly more sensitive, and a high degree of reproducibility is essential when working with DNA and RNA.

Sarstedt's low retention pipette tips increase sample recovery when pipetting in order to ensure no sample residues remain in the pipette tip. Low retention tips als reduce loss of expensive reagents. In addition transfer performance with viscous liquids such as buffers with detergents or glycerine solutions is improved.



Comparative presentation of average pipetting losses



200 µl pipette tips from different suppliers were used with an electronic pipette at constant pipetting speed to aspirate and dispense 100 µl of a dye-loaded test fluid (H_2O; 0.1% (w/v) Triton X-100; 0.25% (w/v) brilliant cresyl blue).

Residue in the pipette tips was washed out through repeated rinsing with 200 µl water in a cuvette and photometrically compared. The test was repeated ten times for each supplier, and the calculated mean values are shown in the diagram opposite.

SARSTEDT

Ordering information – Low retention pipette tips with filter in Biosphere® plus quality

Product (Illustrations: actual size)	Tray color code	Order no.	Volume	Purity Grade	Packaging
	Type E	70.1130.217	2.5 µl	Biosphere® plus	96/box, 480/inner case, 1,920/case
	Type E	70.1130.215	10 µl	Biosphere® plus	96/box, 480/inner case, 1,920/case
	Type N	70.1114.215	20 µl	Biosphere® plus	96/box, 480/inner case, 1,920/case
	Type J	70.1116.215	20 µl	Biosphere® plus	96/box, 480/inner case, 1,920/case
	Type A	70.760.219	20 µl	Biosphere® plus	96/box, 480/inner case, 1,920/case
	Type A	70.760.217	100 µl	Biosphere® plus	96/box, 480/inner case, 1,920/case
	Type C	70.760.216	200 µl	Biosphere® plus	96/box, 480/inner case, 1,920/case
	Type L	70.765.215	300 µl	Biosphere® plus	96/box, 480/inner case, 1,920/case
	Type B	70.762.216	1,000 µl	Biosphere® plus	100/box, 500/inner case, 1,000/case

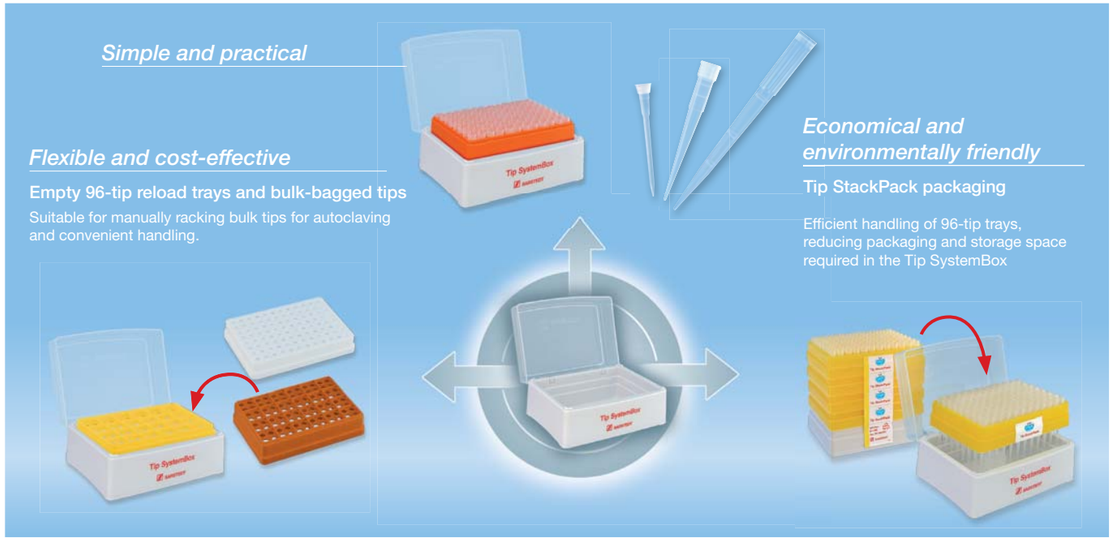
Ordering information – Low retention pipette tips without filter

Product	Tray color code	Order no.	Volume	Packaging
	Type E	70.1130.105	10 µl	96/box, 1,920/case
	Type N	70.1114.105	20 µl	96/box, 1,920/case
	Type J	70.1116.105	20 µl	96/box, 1,920/case
	Type A	70.760.107	200 µl	96/box, 1,920/case
	Type L	70.765.105	300 µl	96/box, 1,920/case
	Type B	70.762.105	1,000 µl	100/box, 1,000/case

SARSTEDT

Tip StackPack – tip handling with a system

Tip SystemBox - the central pipetting station



Tip SystemBox

The autoclavable Tip SystemBox is the central workstation for all 96-tip Sarstedt trays. Complete with hinged lid and anti-slip base, the Tip SystemBox readily accomodates reload trays.

Order no.	Design	Packaging Pcs./case
95.1298.001	Empty Tip SystemBox (without pipette tips)	6

Empty reloading trays for use in the Tip SystemBox

Empty trays for 10 to 300 µl tips can easily be used in the Tip SystemBox and filled with bulk tips.

Ordering information for empty reload trays – coloured trays for identification of tip volumes

Order no.	Tray color code	Tip type/volume	Packaging Pcs./case
95.1760.011		A, C / 200 µl	25
95.1760.022		J, N / 20 µl	25
95.1760.034		E / 10 µl	25
95.1760.044		L / 300 µl	20

SARSTEDT

With the Tip StackPack reload system, you need never manually rack tips again

Tips are preloaded in reusable trays of 96 that are stacked, reducing packaging waste and storage space by over 50%.

- Economical and environmentally friendly
- Space-saving and compact
- Easy to use
- Reduction in waste volume
- Easy transfer of individual layers of 96 tips to the Tip SystemBox for autoclaving and easy handling
- Simply break the perforated safety labels on both sides to access the next layer
- No need for alignment aids when inserting a layer of 96 tips in the Tip SystemBox
- Tips can also be used directly from the stack
- Certified option available in PCR Performance Tested quality

Ordering information – Tip StackPack reloading systems

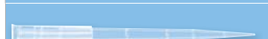
Order no.	Volume	Purity Grade	Packaging
70.1130.600	10 µl		576/StackPack, 2,304/case
70.1130.460	10 µl	PCR	576/StackPack, 2,304/case
70.760.502	200 µl		480/StackPack, 1,920/case
70.760.452	200 µl	PCR	480/StackPack, 1,920/case
70.760.501	250 µl		480/StackPack, 1,920/case
70.760.451	250 µl	PCR	480/StackPack, 1,920/case

SARSTEDT

Ordering information for quality pipette tips with filter

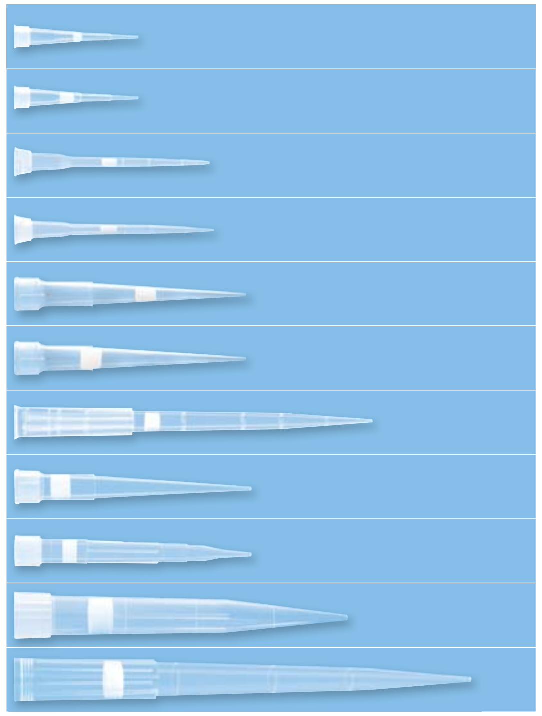
Filter tips (Illustrations: actual size)	Tray color code	Order no.	Max. sample volume/color	Purity Grade	Packaging
	Type E	70.1130.212	2.5 µl, transparent		96/box, 480/inner case, 1,920/case
	Type E	70.1130.210	10 µl, transparent		96/box, 480/inner case, 1,920/case
		70.1130.410			480/bag, 4,800/case
	Type N	70.1114.210	20 µl, transparent		96/box, 480/inner case, 1,920/case
		70.1114.410			480/bag, 4,800/case
	Type J	70.1116.210	20 µl, transparent		96/box, 480/inner case, 1,920/case
	Type A	70.760.213	20 µl, transparent		96/box, 480/inner case, 1,920/case
		70.760.413			480/bag, 4,800/case
	Type A	70.760.212	100 µl, transparent		96/box, 480/inner case, 1,920/case
		70.760.412			480/bag, 4,800/case
 illustration 1:2	Type O Extra long	70.1189.215	200 µl, transparent		96/box, 960/case
	Type C	70.760.211	200 µl, neutral		96/box, 480/inner case, 1,920/case
		70.760.411			480/bag, 4,800/case
	Type L	70.765.210	300 µl, transparent		96/box, 480/inner case, 1,920/case
	Type B	70.762.211	1,000 µl, transparent		100/box, 500/inner case, 1,000/case
		70.762.411			200/bag, 2,000/case
 illustration 1:2	Type M	70.1186.210	1,250 µl, transparent		96/box, 768/case
		70.1186.410			384/bag, 3,840/case

Ordering information for quality pipette tips without filter

Tips without filters (Illustrations: actual size)	Tray color code	Order no.	Max. sample volume/color	Purity Grade	Packaging
	Type E	70.1130			1,000/bag, 10,000/case
		70.1130.100			96/box, 1,920/case
		70.1130.200	10 µl, transparent		96/box, 480/inner case, 1,920/case
		70.1130.600			96/tray, 576/StackPack, 2,304/case
		70.1130.460			96/tray, 576/StackPack, 2,304/case
	Type N	70.1114			1,000/bag, 10,000/case
		70.1114.100	20 µl, transparent		96/box, 1,920/case
		70.1114.200			96/box, 480/inner case, 1,920/case
	Type J	70.1116			1,000/bag, 10,000/case
		70.1116.100	20 µl, transparent		96/box, 1,920/case
		70.1116.200			96/box, 480/inner case, 1,920/case
	Type A	70.760.002	200 µl, transparent		500/bag, 10,000/case
		70.760.012	200 µl, yellow		500/bag, 10,000/case
		70.760.102	200 µl, transparent		96/box, 1,920/case
		70.760.202	200 µl, transparent		96/box, 480/inner case, 1,920/case
		70.760.502	200 µl, transparent		96/tray, 480/StackPack, 1,920/case
		70.760.452	200 µl, transparent		96/tray, 480/StackPack, 1,920/case
 illustration 1:2	Type O Extra long	70.1189.105	200 µl, transparent		96/box, 960/case
	Gelloader illustration 1:2	70.1190.100	200 µl, transparent		96/box, 960/case
	Type C	70.760.001	250 µl, transparent		500/bag, 10,000/case
		70.760.201			96/box, 480/inner case, 1,920/case
		70.760.501			96/tray, 480/StackPack, 1,920/case
		70.760.451			96/tray, 480/StackPack, 1,920/case
	Type L	70.765	300 µl, transparent		500/bag, 5,000/case
		70.765.100			96/box, 1,920/case
		70.765.200			96/box, 480/inner case, 1,920/case
	Type B	70.762	1,000 µl, transparent		250/bag, 5,000/case
		70.762.010	1,000 µl, blue		250/bag, 5,000/case
		70.762.100	1,000 µl, transparent		100/box, 1,000/case
		70.762.200	1,000 µl, transparent		100/box, 500/inner case, 1,000/case
	Type M illustration 1:2	70.1186	1,250 µl, transparent		384/bag, 3,840/case
		70.1186.100			96/box, 3,840/case
		70.1186.200			96/box, 768/case
 illustration 1:2		70.1183.001	5 ml		250/bag, 2,500/case
		70.1183.101			50/box, 500/case
 illustration 1:2		70.1183.002	5 ml		250/bag, 2,500/case
		70.1183.102			50/box, 500/case
 illustration 1:2		70.1187.001	10 ml		200/bag, 2,000/case
		70.1187.101			25/box, 250/case

Compatibility table – pipette tips

Pipette tips with filter
(illustrations 1:2)



Eppendorf® pipettes

Volume	Cat. No.	Eppendorf Reference®							Eppendorf Research®								
		0.1-2.5 µl	0.5-10 µl	2-20 µl	2-20 µl	10-100 µl	50-200 µl	100-1,000 µl	0.1-2.5 µl	0.5-10 µl	2-20 µl	10-100 µl	20-200 µl	30-300 µl MC	100-1,000 µl	500-5,000 µl	1-10 ml
2.5 µl	70.1130.212 70.1130.217	●	● 2.5	● 2.5					●	● 2.5							
10 µl	70.1130.210 70.1130.215 70.1130.410		●	● 10					✗	●							
20 µl	70.1114.210 70.1114.215 70.1114.410	●	●	●					●	●							
20 µl	70.1116.210 70.1116.215	●	●	●					●	●							
20 µl	70.760.213 70.760.219 70.760.413				●	● 20	● 20				✗	● 20	● 20	✗			
100 µl	70.760.212 70.760.217 70.760.412				●	●	● 100				●	●	● 100	✗			
200 µl	70.1189.215				●	●	●				●	●	●				
200 µl	70.760.211 70.760.216 70.760.411				✗	✗	●				✗	✗	●	✗			
300 µl	70.765.210 70.765.215				✗	✗	●				✗	✗	●	●			
1,000 µl	70.762.211 70.762.216 70.762.411							●							●		
1,250 µl	70.1186.210 70.1186.410							●							●		

Eppendorf® pipettes

Volume	Cat. No.	Eppendorf Research® plus										Eppendorf Research® pro									Xplorer®
		0.1-2.5 µl	0.5-10 µl MC	2-20 µl	2-20 µl	10-100 µl MC	20-200 µl	30-300 µl MC	100-1,000 µl	500-5000 µl	1-10 ml	0.5-10 µl	0.5-10 µl MC	5-100 µl	5-100 µl MC	20-300 µl	20-300 µl MC	50-1000 µl	50-1,200 µl MC	100-5000 µl	0.5-10 µl MC
2.5 µl	70.1130.212 70.1130.217	●	● 2.5	● 2.5								● 2.5	● 2.5								
10 µl	70.1130.210 70.1130.215 70.1130.410	✗	●	● 10								●	●								●
20 µl	70.1114.210 70.1114.215 70.1114.410	●	●	●								●	●								●
20 µl	70.1116.210 70.1116.215	●	●	●								●	●								●
20 µl	70.760.213 70.760.219 70.760.413				●	● 20	●	✗						● 20	● 20						
100 µl	70.760.212 70.760.217 70.760.412				●	●	● 100	✗						●	●						
200 µl	70.1189.215				●	●	●							●							
200 µl	70.760.211 70.760.216 70.760.411				✗	✗	●	✗								● 200	● 200				
300 µl	70.765.210 70.765.215						●	●								●	●				
1,000 µl	70.762.211 70.762.216 70.762.411								●									●	✗		
1,250 µl	70.1186.210 70.1186.410								●									●	●		

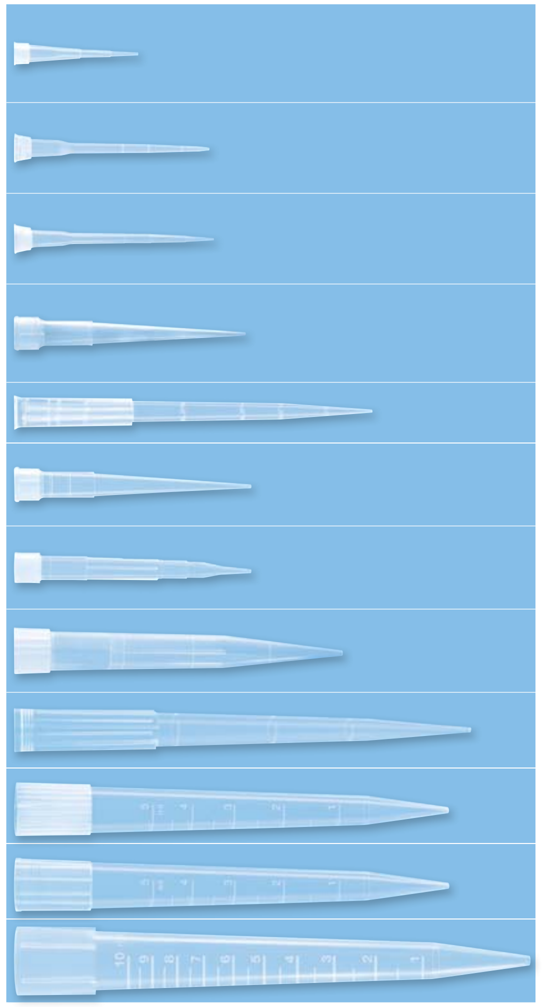
Thermo® Finnpipettes

Volume	Cat. No.	Finnpipette® Digital/F1/F2												Finnpipette® Focus				
		0.2-2 µl	F2 0.5-5 µl	F1 1-10 µl	0.5-10 µl univ.	0.5-10 µl MC	2-20 µl univ.	5-50 µl MC	10-100 µl univ.	20-200 µl univ.	50-300 µl MC	100-1,000 µl	200-1,000 µl	0.3-3 µl	0.5-5 µl	1-10 µl	30-300 µl	100-1,000 µl
2.5 µl	70.1130.212 70.1130.217	●			● 2.5	● 2.5								●	● 2.5	● 2.5		
10 µl	70.1130.210 70.1130.215 70.1130.410				●	●									●	●		
20 µl	70.1114.210 70.1114.215 70.1114.410	●		●	●	●									●	●		
20 µl	70.1116.210 70.1116.215	●			●	●									●	●		
20 µl	70.760.213 70.760.219 70.760.413						●			● 20							✗	
100 µl	70.760.212 70.760.217 70.760.412								●	● 100	● 100						✗	
200 µl	70.1189.215						●		●	●								
200 µl	70.760.211 70.760.216 70.760.411						✗		✗	●							● 200	
300 µl	70.765.210 70.765.215						✗		✗	●	●						●	
1,000 µl	70.762.211 70.762.216 70.762.411											●	●					●
1,250 µl	70.1186.210 70.1186.410											●	●					●

Thermo® Finnpipettes / Gilson® pipettes

Volume	Cat. No.	Finnpipette® Novus				Bio Control	Pipetman®/Ultra/Concept									
		30-300 µl	30-300 µl MC	100-1,000 µl	100-1,200 µl MC	50-300 µl MC	P2/U2 0.2-2 µl	P10/U10 0.1-10 µl	C8/C12 1-10 µl	P20/U20 2-20 µl	P100/U100 20-100 µl	P200/U200 20-200 µl	U8 20-300 µl	P1,000/U3,000 200-1,000 µl	P5,000/U5,000 1000-5000 µl	P10/U10 1-10 ml
2.5 µl	70.1130.212 70.1130.217						●	● 2.5	✗							
10 µl	70.1130.210 70.1130.215 70.1130.410						●	●	✗							
20 µl	70.1114.210 70.1114.215 70.1114.410						●	✗								
20 µl	70.1116.210 70.1116.215						●	●	✗							
20 µl	70.760.213 70.760.219 70.760.413									●	● 20					
100 µl	70.760.212 70.760.217 70.760.412									✗	●	●				
200 µl	70.1189.215									●	●	●				
200 µl	70.760.211 70.760.216 70.760.411	● 200	● 200							✗	✗	●	✗			
300 µl	70.765.210 70.765.215					●				✗	✗	●	●			
1,000 µl	70.762.211 70.762.216 70.762.411			●										●		
1,250 µl	70.1186.210 70.1186.410				●									●		

Pipette tips without filter (illustrations 1:2)



Eppendorf® pipettes

Volume	Cat. No.	Eppendorf Reference®							Eppendorf Research®								
		0.1-2.5 µl	0.5-10 µl	2-20 µl	2-20 µl	10-100 µl	50-200 µl	100-1,000 µl	0.1-2.5 µl	0.5-10 µl	2-20 µl	10-100 µl	20-200 µl	30-300 µl MC	100-1,000 µl	500-5,000 µl	1-10 ml
10 µl	70.1130 70.1130.100 70.1130.105 70.1130.200 70.1130.600	●	●	●					●	●							
20 µl	70.1114 70.1114.100 70.1114.105 70.1114.200	●	●	●					✗	●							
20 µl	70.1116 70.1116.100 70.1116.105 70.1116.200	●	●	●					●	●							
200 µl	70.760.002 70.760.102 70.760.107 70.760.202 70.760.502				●	●	●				●	●	●	✗			
200 µl	70.1189.105				●	●	●				●	●	●				
250 µl	70.760.001 70.760.201 70.760.501				●	●	●						●	✗			
300 µl	70.765 70.765.100 70.765.105 70.765.200				✗	✗	●				✗	✗	●	●			
1,000 µl	70.762 70.762.100 70.762.105 70.762.200							●							●		
1,250 µl	70.1186 70.1186.100 70.1186.200							●							●		
5 ml	70.1183.001 70.1183.101															✗	
5 ml	70.1183.002 70.1183.102															●	
10 ml	70.1187.001 70.1187.101																●

Eppendorf® pipettes

Volume	Cat. No.	Eppendorf Research® plus										Eppendorf Research® pro									Xplorer®
		0.1-2.5 µl	0.5-10 µl MC	2-20 µl	2-20 µl	10-100 µl MC	20-200 µl	30-300 µl MC	100-1,000 µl	500-5000 µl	1-10 ml	0.5-10 µl	0.5-10 µl MC	5-100 µl	5-100 µl MC	20-300 µl	20-300 µl MC	50-1000 µl	50-1,200 µl MC	100-5000 µl	0.5-10 µl MC
10 µl	70.1130 70.1130.100 70.1130.105 70.1130.200 70.1130.600	●	●	● 10								●	●								●
20 µl	70.1114 70.1114.100 70.1114.105 70.1114.200	●	●	●								●	●								●
20 µl	70.1116 70.1116.100 70.1116.105 70.1116.200	●	●	●								●	●								●
200 µl	70.760.002 70.760.102 70.760.107 70.760.202 70.760.502				●	●	●	✗						●	●						
200 µl	70.1189.105				●	●	●							●							
250 µl	70.760.001 70.760.201 70.760.501					●	●	✗								● 250	● 250				
300 µl	70.765 70.765.100 70.765.105 70.765.200				✗	✗	●	●						✗	✗	●	●				
1,000 µl	70.762 70.762.100 70.762.105 70.762.200								●									●	✗		
1,250 µl	70.1186 70.1186.100 70.1186.200								●									●	●		
5 ml	70.1183.001 70.1183.101									✗										✗	
5 ml	70.1183.002 70.1183.102									●										●	
10 ml	70.1187.001 70.1187.101										●										

Thermo® Finnpipettes

Volume	Cat. No.	Finnpipette® Digital/F1/F2												Finnpipette® Focus				
		0.2-2 µl	F2 0.5-5 µl	F1 1-10 µl	0.5-10 µl univ.	0.5-10 µl MC	2-20 µl univ.	5-50 µl MC	10-100 µl univ.	20-200 µl univ.	50-300 µl MC	100-1,000 µl	200-1,000 µl	0.3-3 µl	0.5-5 µl	1-10 µl	30-300 µl	100-1,000 µl
10 µl	70.1130 70.1130.100 70.1130.105 70.1130.200 70.1130.600	●			●	●								●	●	●		
20 µl	70.1114 70.1114.100 70.1114.105 70.1114.200	●	●	●	●	●									●	●		
20 µl	70.1116 70.1116.100 70.1116.105 70.1116.200	●			●	●									●	●		
200 µl	70.760.002 70.760.102 70.760.107 70.760.202 70.760.502						●		●	●	● 200						✗	
200 µl	70.1189.105						●		●	●								
250 µl	70.760.001 70.760.201 70.760.501						✗		✗	●							● 250	
300 µl	70.765 70.765.100 70.765.105 70.765.200						✗		✗	●	●						●	
1,000 µl	70.762 70.762.100 70.762.105 70.762.200											●	●					●
1,250 µl	70.1186 70.1186.100 70.1186.200											●	●					●
5 ml	70.1183.001 70.1183.101																	
5 ml	70.1183.002 70.1183.102																	
10 ml	70.1187.001 70.1187.101																	

Thermo® Finnpipettes / Gilson® pipettes

Volume	Cat. No.	Finnpipette® Novus				Bio Control	Pipetman®/Ultra/Concept									
		30-300 µl	30-300 µl MC	100-1,000 µl	100-1,200 µl MC	50-300 µl MC	P2/U2 0.2-2 µl	P10/U10 0.1-10 µl	C8/C12 1-10 µl	P20/U20 2-20 µl	P100/U100 20-100 µl	P200/U200 20-200 µl	U8 20-300 µl	P1,000/U3,000 200-1,000 µl	P5,000/U5,000 1000-5000 µl	P10/U10 1-10 ml
10 µl	70.1130 70.1130.100 70.1130.105 70.1130.200 70.1130.600						●	●	✗							
20 µl	70.1114 70.1114.100 70.1114.105 70.1114.200						●	✗								
20 µl	70.1116 70.1116.100 70.1116.105 70.1116.200						●	●	✗							
200 µl	70.760.002 70.760.102 70.760.107 70.760.202 70.760.502									●	●	●	● 200			
200 µl	70.1189.105									●	●	●				
250 µl	70.760.001 70.760.201 70.760.501									✗	✗	●	● 250			
300 µl	70.765 70.765.100 70.765.105 70.765.200	●	●			●				✗	✗	●	●			
1,000 µl	70.762 70.762.100 70.762.105 70.762.200			●	✗									●		
1,250 µl	70.1186 70.1186.100 70.1186.200				●									●		
5 ml	70.1183.001 70.1183.101														●	
5 ml	70.1183.002 70.1183.102														✗	
10 ml	70.1187.001 70.1187.101															●

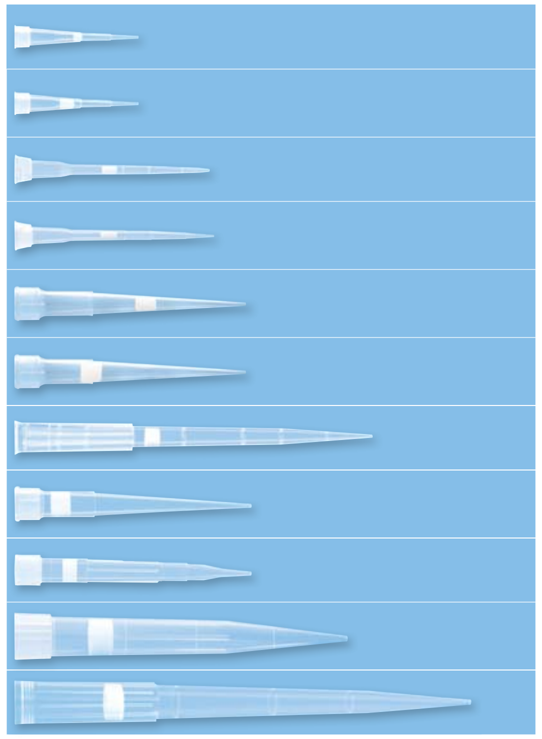
● = compatible
10 = limited pipetting volume
✗ = not recommended
(shaded) = not checked
MC = multi-channel pipette

Pipette manufacturers revise or modify the pipette cones on their pipettes as part of technical modifications. Our recommendations in the compatibility table can therefore only be taken as a guide. In case of doubt, we are happy to provide sample tips to you free of charge in order to ensure the optimal fit and performance of our tips with your pipettes.

SARSTEDT

Compatibility table – pipette tips

Pipette tips with filter (illustrations 1:2)



Biohit® pipettes

		mLine® Mechanical								Proline® Mechanical									eLine® Electronic					
		0.5-10 µl	0.5-10 µl MC	2-20 µl	10-100 µl	20-200 µl	30-300 µl MC	100-1,000 µl	100-5,000 µl	0.1-2.5 µl	0.5-10 µl	5-50 µl	5-50 µl MC	20-200 µl	50-250 µl MC	50-300 µl MC	100-1,000 µl	100-5,000 µl	0.2-10 µl	10-300 µl	50-1,000 µl	50-1,200 µl MC	100-5,000 µl	0.1-1 µl
2.5 µl	70.1130.212 70.1130.217	● 2.5	● 2.5							●	● 2.5								● 2.5					✗
10 µl	70.1130.210 70.1130.215 70.1130.410	●	●								●								●					✗
20 µl	70.1114.210 70.1114.215 70.1114.410	●																						
20 µl	70.1116.210 70.1116.215	●	●							●	●								●					✗
20 µl	70.760.213 70.760.219 70.760.413				✗	✗	✗					● 20	● 20	✗	✗	✗				✗				
100 µl	70.760.212 70.760.217 70.760.412				✗	● 100						●	●	● 100	✗	✗				✗				
200 µl	70.1189.215			●	●	●						●		●										
200 µl	70.760.211 70.760.216 70.760.411				✗	●						✗	✗	●	● 200	● 200				✗				
300 µl	70.765.210 70.765.215				✗	●	●					✗	✗	●	●	●				●				
1,000 µl	70.762.211 70.762.216 70.762.411							●									●				●	✗		
1,250 µl	70.1186.210 70.1186.410							●									●					✗		

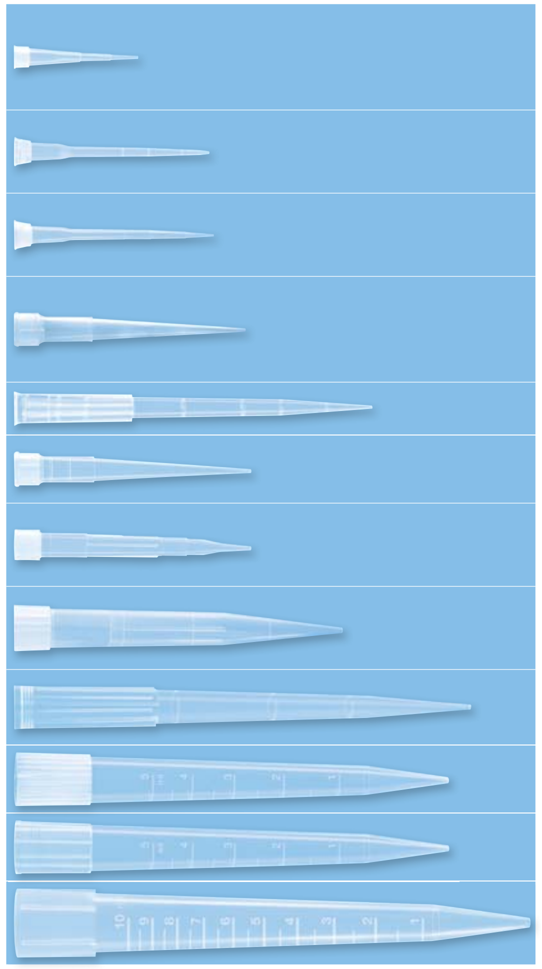
Brand® pipettes

		Transferpette® Digital									Transferpette® S									Transferpette® Electronic					
		0.5-10 µl	2-20 µl	2-20 µl	5-50 µl	10-100 µl	20-200 µl	30-300 µl MC	25-250 µl	100-1,000 µl	0.1-1 µl	0.5-10 µl	0.5-10 µl MC	2-20 µl	10-100 µl	20-200 µl	30-300 µl MC	100-1,000 µl	1-10 ml	0.5-10 µl	0.5-10 µl MC	2-20 µl	1-20 µl MC	20-200 µl	100-1,000 µl
2.5 µl	70.1130.212 70.1130.217	● 2.5	● 2.5								✗	● 2.5	● 2.5							● 2.5	● 2.5	● 2.5	● 2.5		
10 µl	70.1130.210 70.1130.215 70.1130.410	●	● 10								✗	●	●							●	●	●	●		
20 µl	70.1114.210 70.1114.215 70.1114.410	●	●								✗														
20 µl	70.1116.210 70.1116.215	●	●								✗	●	●							●	●	●	●		
20 µl	70.760.213 70.760.219 70.760.413			●	●	● 20	✗	✗						●	● 20	● 20	✗							● 20	
100 µl	70.760.212 70.760.217 70.760.412			✗	✗	✗	✗	✗						✗	✗	● 100	✗							● 100	
200 µl	70.1189.215																								
200 µl	70.760.211 70.760.216 70.760.411			✗	✗	✗	✗	✗						✗	✗	●	✗							● 100	
300 µl	70.765.210 70.765.215			✗	✗	✗	●	●						✗	✗	●	✗							●	
1,000 µl	70.762.211 70.762.216 70.762.411								✗	●								●							●
1,250 µl	70.1186.210 70.1186.410								✗	●								●							●

Socorex® manual/electronic pipettes

		Calibra® Manual Micro 822							C. M. Multi 852			Acura® Manual Micro 825 Acura® Electro Micro 925								A. 835/935e	Acura® Multi 855/955e		
		0.2-2 µl	1-10 µl	1-10 µl	2-20 µl	10-100 µl	20-200 µl	100-1,000 µl	1-10 µl	10-100 µl	20-200 µl	0.1-2 µl	0.5-10 µl	1-10 µl	2-20 µl	5-50 µl	10-100 µl	10-200 µl	100-1,000 µl	0.5-5 ml	0.5-10 µl MC	5-50 µl MC	20-200 µl MC
2.5 µl	70.1130.212 70.1130.217	●	● 2.5						● 2.5			●	✗								● 2.5		
10 µl	70.1130.210 70.1130.215 70.1130.410	●	●						●			●	●								●		
20 µl	70.1114.210 70.1114.215 70.1114.410	●	●									●	●										
20 µl	70.1116.210 70.1116.215	✗	✗						✗			●	●										
20 µl	70.760.213 70.760.219 70.760.413			● 10	●	● 20	✗			●	✗			●	●	● 20	● 20	✗				●	✗
100 µl	70.760.212 70.760.217 70.760.412			✗	✗	✗	● 100			✗	●			✗	✗	●	●	● 100				●	● 100
200 µl	70.1189.215														●	●	●	●					
200 µl	70.760.211 70.760.216 70.760.411			✗	✗	✗	✗			✗	✗			✗	✗	✗	✗	●				✗	●
300 µl	70.765.210 70.765.215			✗	✗	✗	●			✗	✗			✗	✗	✗	✗	●				✗	●
1,000 µl	70.762.211 70.762.216 70.762.411							●											●				
1,250 µl	70.1186.210 70.1186.410							●											●				

Pipette tips without filter (illustrations 1:2)



Biohit® pipettes

		mLine® Mechanical								Proline® Mechanical									eLine® Electronic					
		0.5-10 µl	0.5-10 µl MC	2-20 µl	10-100 µl	20-200 µl	30-300 µl MC	100-1,000 µl	100-5,000 µl	0.1-2.5 µl	0.5-10 µl	5-50 µl	5-50 µl MC	20-200 µl	50-250 µl MC	50-300 µl MC	100-1,000 µl	100-5,000 µl	0.2-10 µl	10-300 µl	50-1,000 µl	50-1,200 µl MC	100-5,000 µl	0.1-1 µl
10 µl	70.1130 70.1130.100 70.1130.105 70.1130.200 70.1130.600	●	●							●	●								●					●
20 µl	70.1114 70.1114.100 70.1114.105 70.1114.200	●																						
20 µl	70.1116 70.1116.100 70.1116.105 70.1116.200	●	●							●	●								●					✗
200 µl	70.760.002 70.760.102 70.760.107 70.760.202 70.760.502				✗	●	✗					●	●	✗	✗	✗				✗				
200 µl	70.1189.105			●	●	●						●		●										
250 µl	70.760.001 70.760.201 70.760.501				✗	●						●	●	●	●	● 250				✗				
300 µl	70.765 70.765.100 70.765.105 70.765.200				✗	●	●					✗	✗	●	●	●				●				
1,000 µl	70.762 70.762.100 70.762.105 70.762.200							●									●				●	✗		
1,250 µl	70.1186 70.1186.100 70.1186.200							●									●					✗		
5 ml	70.1183.001 70.1183.101								✗									✗					✗	
5 ml	70.1183.002 70.1183.102								●									●					●	
10 ml	70.1187.001 70.1187.101																							

Brand® pipettes

		Transferpette® Digital									Transferpette® S									Transferpette® Electronic					
		0.5-10 µl	2-20 µl	2-20 µl	5-50 µl	10-100 µl	20-200 µl	30-300 µl MC	25-250 µl	100-1,000 µl	0.1-1 µl	0.5-10 µl	0.5-10 µl MC	2-20 µl	10-100 µl	20-200 µl	30-300 µl MC	100-1,000 µl	1-10 ml	0.5-10 µl	0.5-10 µl MC	2-20 µl	1-20 µl MC	20-200 µl	100-1,000 µl
10 µl	70.1130 70.1130.100 70.1130.105 70.1130.200 70.1130.600	●	●								✗	●	●							●	●	●	●		
20 µl	70.1114 70.1114.100 70.1114.105 70.1114.200	●	●																						
20 µl	70.1116 70.1116.100 70.1116.105 70.1116.200	●	●								✗	●	●							●	●	●	●		
200 µl	70.760.002 70.760.102 70.760.107 70.760.202 70.760.502			●	●	●	✗	✗						●	●	●	✗							●	
200 µl	70.1189.105																								
250 µl	70.760.001 70.760.201 70.760.501			●	●	●	✗	✗						●	●	●	✗							●	
300 µl	70.765 70.765.100 70.765.105 70.765.200			✗	✗	✗	●	●						✗	✗	●	✗							●	
1,000 µl	70.762 70.762.100 70.762.105 70.762.200								●	●								●							●
1,250 µl	70.1186 70.1186.100 70.1186.200								●	●								●							●
5 ml	70.1183.001 70.1183.101																								
5 ml	70.1183.002 70.1183.102																								
10 ml	70.1187.001 70.1187.101																		●						

Socorex® manual/electronic pipettes

		Calibra® Manual Micro 822							C. M. Multi 852			Acura® Manual Micro 825 Acura® Electro Micro 925								A. 835/935e	Acura® Multi 855/955e		
		0.2-2 µl	1-10 µl	1-10 µl	2-20 µl	10-100 µl	20-200 µl	100-1,000 µl	1-10 µl	10-100 µl	20-200 µl	0.1-2 µl	0.5-10 µl	1-10 µl	2-20 µl	5-50 µl	10-100 µl	10-200 µl	100-1,000 µl	0.5-5 ml	0.5-10 µl MC	5-50 µl MC	20-200 µl MC
10 µl	70.1130 70.1130.100 70.1130.105 70.1130.200 70.1130.600	●	●						●			●	●								●		
20 µl	70.1114 70.1114.100 70.1114.105 70.1114.200	●	●									●	●										
20 µl	70.1116 70.1116.100 70.1116.105 70.1116.200	●	●						✗			●	●										
200 µl	70.760.002 70.760.102 70.760.107 70.760.202 70.760.502			●	●	●	●			●	●			●	●	●	●	●				●	●
200 µl	70.1189.105														●	●	●	●					
250 µl	70.760.001 70.760.201 70.760.501			✗	✗	✗	●			✗	✗			✗	✗	✗	✗	●				✗	●
300 µl	70.765 70.765.100 70.765.105 70.765.200			✗	✗	✗	●			✗	✗			✗	✗	●	●	●				✗	●
1,000 µl	70.762 70.762.100 70.762.105 70.762.200							●											●				
1,250 µl	70.1186 70.1186.100 70.1186.200							●											●				
5 ml	70.1183.001 70.1183.101																			✗			
5 ml	70.1183.002 70.1183.102																			●			
10 ml	70.1187.001 70.1187.101																			✗			

● = compatible
10 = limited pipetting volume
✗ = not recommended

(pale yellow cell) = not checked
MC = multi-channel pipette

Pipette manufacturers revise or modify the pipette cones on their pipettes as part of technical modifications. Our recommendations in the compatibility table can therefore only be taken as a guide. In case of doubt, we are happy to provide sample tips to you free of charge in order to ensure the optimal fit and performance of our tips with your pipettes.

SARSTEDT

SARSTEDT

Proven quality – Multiply® reaction tubes for PCR

Sarstedt Multiply® PCR tubes are designed differently than traditional micro tubes. Multiply® tubes are engineered for easy use and to reduce contamination risks.

Integrated contamination protection:

Can be opened without touching the inside of the lid

- Easy and safe to open
- Anti-contamination shield prevents contamination

Application-specific lid geometry:

- Flat, frosted cap with large labeling area
- Rough surface of labeling area prevents smudging of the label in the thermocycler
- Optimized lid geometry for maximum usage of heating block capacity

Optimized for PCR

- Optimal temperature transfer through thin-walled reaction tube
- Compatible with all common thermocyclers in 0.2 or 0.5 ml block format
- Suitable for centrifuging in the most common micro-centrifuges
- Small, separately packed, sterile Biosphere® plus or PCR Performance Tested - certified bag units also available

SARSTEDT

Ordering information for Multiply® PCR tubes

Multiply® Pro 0.2 and 0.5 ml with integrated anti-contamination shield on front edge of lid

Product	Order no.	Vol.	Color	Quality Grade	Units/bag Units/case
	72.735.100	0.5 ml	Transparent		100/1,000
	72.735.002	0.5 ml	Transparent		500/2,000
	72.735.992	0.5 ml			50/3,000
	72.737	0.2 ml	Transparent		250/2,000
	72.737.002	0.2 ml	Transparent		500/2,000
	72.737.992	0.2 ml			50/3,000

PCR strips/Multiply® µStripPro with and without lid

Product	Order no.	Vol.	Profile	Color	Lid strip	Quality Grade	Units/bag Units/case
	72.991.102	0.2 ml	High	Transparent	-		120/1,200
	72.991.103	0.1 ml	Low	Transparent	-		12/1200
	72.994.002	0.2 ml	High	neutral	-		120/1,200
	72.994.992	0.2 ml	High		-		120/1,200
	72.985.002	0.2 ml	High	Transparent	65.989.XXX		120/480
	72.985.992	0.2 ml	High		65.989.XXX		120/480
	72.985.092	0.2 ml	High	White	65.989.XXX		120/480
	72.982.002	0.1 ml	Low	Transparent	Included		125/1250
	72.982.092	0.1 ml	Low	White	Included		125/1250

Multiply® lid strips, clear, suitable for real-time PCR

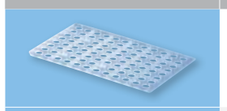
Product	Order no.	Multiply® µStrip, suitable for	Color	Quality Grade	Units/bag Units/case
	65.989	72.985 72.985.002 72.985.992 72.985.092	Highly transparent		12/240
	65.989.002	72.985 72.985.002 72.985.992 72.985.092	Highly transparent		120/480

SARSTEDT

RackSystem storage and pipetting station for 0.2 ml Multiply® PCR tubes and preloaded PCR trays

- Secure and rapid handling of Multiply® tubes
- Flexible 2-part system comprising work tray and base station
- Work tray can be inserted in the thermocycler without the need to move tubes
- 96-well microtiter format makes it ready for use with automated processing
- Stackable for space-saving back-up sample storage

Ordering information for PCR RackSystem

Product	Order no.	Product description	Design	Packaging unit
	95.987.002	PCR work tray for 0.2 ml PCR tubes	For 96 tubes	5/bag
	95.988	Base station for PCR work tray	Transparent	5/case
	95.988.001		Red	
	95.988.002		Blue	
	95.988.003		Green	
	95.988.004		Yellow	

IsoFreeze® racks – reliable cooling of samples

Many sample preparations require consistent and reliable sample cooling. For temperature-sensitive applications, such as the analysis of enzymes, PCRs or cell-based assays, as well as the careful thawing of samples and the stopping of reactions, we offer the IsoFreeze® Rack; a pipetting and storage station with reliable temperature control.

- Consistently cooled samples – noticeable color change from purple to pink when it moves outside the optimum temperature range (above 7°C).
- With the lid in place and at normal ambient temperatures, the temperature of the samples is maintained at around 4°C for up to 3 hours.
- Minimizes the risk of contamination, as there is no need to store samples on ice.

Ordering information

Order no.	Capacity	Format	Suitable for	Packaging
95.983	24	4 x 6	1.5 and 2.0 ml micro tubes and screw-cap micro tubes	1/case
95.984	96	8 x 12	0.1 and 0.2 ml PCR plates, strips and single tubes	2/case

SARSTEDT

Cost-saving miniaturization of qPCR assay in white Multiply® PCR plates

Fluorescence-based applications, like qPCR, particularly those involving small volumes, benefit from significantly improved reflective properties of white wells. Samples with low DNA concentrations can also be more easily detected.

The level of fluorescence of white wells is up to ten times greater than that of clear wells. With white wells, the C_t values are obtained earlier due to maximum signal reflection (see fig. 1). The volume of reagent (SYBR Green) per well can be reduced from 25 µl to 15 µl in white plates sealed with optimum qPCR films, without significantly affecting sensitivity or stability of the reaction (see fig. 2). This effectively reduces the cost of the qPCR assay by 40%.

In addition, white plates reduce background interference (‘crosstalk’ between clear wells/cycler block), which in turn diminishes well-to-well variability.

Comparison of the fluorescence level of white and transparent wells

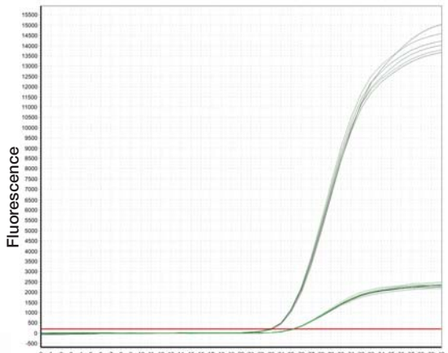


Fig. 1

C_t values for the detection of plasmid copies in white and transparent plates at reduced reaction volumes

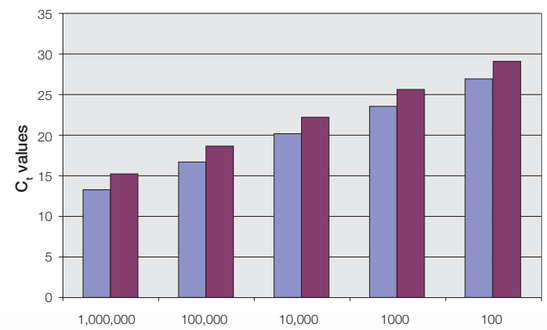


Fig. 2

- Fluorescence level 10x higher
- Greater sensitivity
- Improved reproducibility

SARSTEDT

Multiply® polypropylene PCR plates, white and transparent

- Optimal temperature transfer through thin-walled reaction tube
- Plates with half and full skirt available, also with barcode label upon request
- White plates are optimized for real-time PCR
- Black alphanumeric print for easy identification of wells

Tip:
to easily identify which plate is suitable for your thermocycler use our compatibility table on page 30/31 or at www.sarstedt.com.

Low profile 96-well Multiply® PCR plates

The low profile design means there is less room for the liquid PCR mixture to transfer to the gas phase when it is being heated in the thermocycler, reducing the formation of condensation on the side walls when heated during PCR. This in turn keeps the PCR mixture reaction conditions more constant, ensuring improved reaction efficiency.

Universal plates without skirt

- Developed for use in Fast PCR thermocycler
- Compatible with all sealing films and foils

Order no.	Color	Skirt	Deck	Profile	Well	Max. volume	Units/bag Units/case
72.1977.202	Transparent	Without	Flat	Low profile	96	0.1 ml	20/100
72.1977.232	White	Without	Flat	Low profile	96	0.1 ml	20/100

Half-skirt design

- Compatible with many Applied Biosystems (ABI) thermocyclers
- Increased stability for automated systems
- Can be sealed using clear 8-lid strips (65.1998.400) or adhesive films and foils (95.1999, 95.1994 and 95.1993)

Order no.	Color	Skirt	Deck	Profile	Well	Max. volume	Units/bag Units/case
72.1981.202	Transparent	Half-skirt	Lip around deck edge	Low profile	96	0.1 ml	25/100
72.1981.232	White	Half-skirt	Lip around deck edge	Low profile	96	0.1 ml	25/100

Lightcycler 480 PCR plate with 96 wells and lateral skirt

- Raised well edges, tailored for heat-sealing films
- Can be sealed using qPCR film (95.1999, 95.1994, 95.1993) or clear 8-lid strips (65.1998.400)
- Low profile design minimizes dead volume and cycle time

Order no.	Color	Skirt	Deck	Profile	Well	Max. volume	Units/bag Units/case
72.1982.202	White	Half-skirt	Flat deck	Low profile	96	0.1 ml	25/100

White and transparent PCR plates

Stable full-skirt design

- Increased stability for automated systems
- Raised well edges, tailored for heat-sealing films
- Can be sealed using qPCR film (95.1999, 95.1994, 1993) or clear 8-lid strips (65.1998.400)

Order no.	Color	Skirt	Deck	Profile	Well	Max. volume	Units/bag Units/case
72.1980.202	Transparent	Full skirt	Flat deck	Low profile	96	0.1 ml	10/200
72.1980.232	White	Full skirt	Flat deck	Low profile	96	0.1 ml	10/200

High profile 96-well Multiply® PCR plates

High profile PCR plates are available with half-skirt, full-skirt or no skirt.

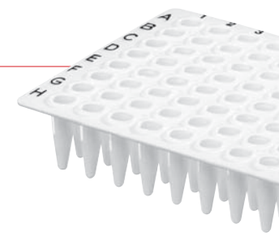
Conveniently preloaded – the alternative to polycarbonate frame plates

- PCR work tray loaded with twelve 8-well PCR strips
- Biosphere® plus individually sterile wrapped
- Can be sealed using clear 8-lid strips (65.989.002 or 65.989)
- Polycarbonate work tray
- Can be used in the RackSystem (see p. 24)
- Free of DNA, DNase/RNase, PCR inhibitors, ATP and pyrogens/endotoxins

Order no.	Color	Skirt	Deck	Profile	Well	Max. volume	Blister packs/box
72.985	Transparent	Without	Flat	High profile	96	0.3 ml	1/20

Universal plates without skirt – easy to cut

- Their universal design means that PCR plates without a skirt are suitable for use with most thermocyclers
- Can easily be cut into smaller sections for lower number of specimens
- Raised well edges, tailored for heat-sealing films
- Can be sealed using qPCR film (95.1999, 95.1994, 95.1993) or clear 8-lid strips (65.1998.400)



Order no.	Colour	Skirt	Deck	Profile	Well	Max. volume	Units/bag Units/case
72.1978.202	Transparent	Without	Flat	High profile	96	0.3 ml	5/100
72.1978.232	White	Without	Flat	High profile	96	0.3 ml	10/200

Half-skirt design – practical flat deck

- Specially designed for Applied Biosystems (ABI) thermocyclers and DNA sequencers
- Flat deck makes it easier to securely seal with film
- Raised well edges, tailored for heat-sealing films
- Can be sealed using qPCR film (95.1999, 95.1994, 95.1993) or clear 8-lid strips (65.1998.400)
- Also available with barcode label

Order no.	Color	Skirt	Deck	Profile	Well	Max. volume	Units/bag Units/case
72.1979.102	Transparent	Half-skirt	Flat deck	High profile	96	0.3 ml	5/100
72.1979.132	White	Half-skirt	Flat deck	High profile	96	0.3 ml	5/100

Half-skirt design – raised lip around edge

- Specially designed for Applied Biosystems (ABI) thermocyclers and DNA sequencers
- Facilitates automated processing
- Can be sealed using clear 8-lid strips (65.1998.400) or adhesive films (95.1999, 95.1994 and 95.1993)
- Also available with barcode label (72.1979.203)

Order no.	Color	Skirt	Deck	Profile	Well	Max. volume	Units/bag Units/case
72.1979.202	Transparent	Half-skirt	Lip around deck edge	High profile	96	0.3 ml	25/100
72.1979.203	Transparent	Half-skirt with barcode label	Lip around deck edge	High profile	96	0.3 ml	25/100

Clear lid strip for 96-well plates

Product	Order no.	Description	Design	Color	Units/bag Units/case
	65.1998.400	Strip of 8 lids, flat for 96-well plates, highly transparent		Transparent	12/1,200

384-well Multiply® PCR plate with lateral skirt

- Eight openings in the frame allow for easier positioning and removal from the heating block
- Can be sealed using adhesive films (95.1999, 95.1994 and 95.1993)
- Suitable for use with many robotic systems

Order no.	Color	Skirt	Deck	Well	Max. volume	Units/bag Units/case
72.1984.202	Transparent	Full skirt	Flat deck	384	40 µl	25/50

Lightcycler 480 PCR plate with 384 well and lateral skirt

- Raised well edges, tailored for heat-sealing films
- Can be sealed using qPCR film (95.1999, 95.1994 and 95.1993)

Order no.	Color	Skirt	Deck	Well	Max. volume	Units/bag Units/case
72.1985.202	White	Full skirt	Flat deck	384	40 µl	50/100

Multiply® PCR plates – compatibility table

Number of wells	96 pre-inserted	96	96	96	96	384 full skirt
Half/full skirt	Without	Without	Half	Full	Half	Full
Profile	High	High	High	Low	Low	-
Order no. PCR plates	72.985	72.1978.202 72.1978.232	72.1979.102 72.1979.132 72.1979.202 72.1979.203	72.1980.202 72.1980.232	72.1981.202 72.1981.232	72.1984.202
Amersham Biosciences® / GE Healthcare®						
MegaBACE 500/1000 DNA Analysis System				●		
MegaBACE 4000 DNA Analysis System						●
Analytik Jena®/Biometra®						
FlexCycler² 96-well		●				
qTOWER 2.0/2.2 SP	●	●		●		
SpeedCycler² 96-well SP & SPR	●	●		●		
TAdvanced	●	●				
TOptical	●	●		●		
TRobot 96-well	●	●		●		
TRobot 384-well						●
TProfessional family 96-well (except TRIO)		●		●		
TProfessional family 384-well (except TRIO)						●
Applied Biosystems®/Life Technologies®						
GeneAmp® 2700/2720		●	●			
GeneAmp® 7500/5700		●	●			
GeneAmp® 9600	●	●	●			
GeneAmp® 9700	●	●	●			
GeneAmp® 9800 FAST Block					●	
PE 2700		●	●			
PE 9600	●	●	●			
PE 9700	●	●	●			
Prism® 2720		●	●			
Prism® 7000/7700		●	●			
Prism® 7300/7500			●			
Prism® 7500 Fast					●	
Prism® 7900HT			●			●
Prism® 7900 Fast					●	
Prism® 7900HT Fast					●	●
QuantStudio™			●			
StepOne Plus™					●	
Veriti® 96-well/384-well			●			●
Veriti® Fast 96-well			●		●	
ViiA7™			●			
310 Genetic Analyser		●	●		●*	
3100/3130 Genetic Analyser		●	●		●*	
3500/ 3500XL Genetic Analyser			●		●*	
3700/3730/3730XL Genetic Analyser		●	●		●*	
PeqLab®						
peqSTAR 96		●	●	●		
peqSTAR 384						●
Thermo Fisher Scientific®						
MultiBlock System		●		●		●
PCR Sprint		●		●		

Key: ● = recommended = not checked * with a suitable ABI adapter

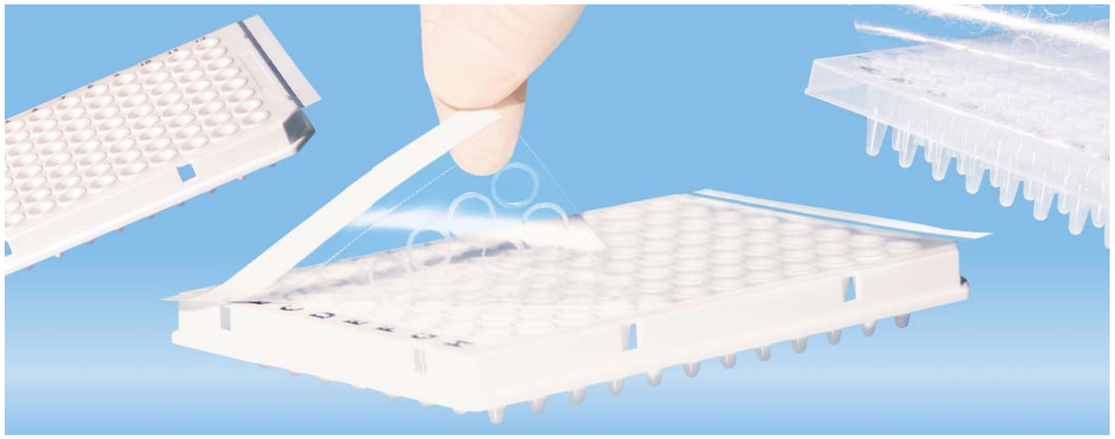
The compatibility table shows usage recommendations for the products listed. Please note that we do not routinely test the products for their compatibility with the listed devices. Product characteristics therefore cannot be guaranteed.

SARSTEDT

Multiply® PCR plates – compatibility table

Number of wells	96 pre-inserted	96	96	96	96	384 full skirt	96-well	384-well
Half/full skirt	Without	Without	Half	Full	Half	Full	Full	Full
Profile	High	High	High	Low	Low	-	'Lightcycler'	'Lightcycler'
Order no. PCR plates	72.985	72.1978.202 72.1978.232	72.1979.102 72.1979.132 72.1979.202 72.1979.203	72.1980.202 72.1980.232	72.1981.202 72.1981.232	72.1984.202	72.1982.202	72.1985.202
BioRad®/MJ Research®								
CFX96 Touch™ Real-Time PCR				●				
CFX384 Touch™ Real-Time PCR						●		
CFX Automation System II								
T100™ Thermal Cycler	●	●		●				
S1000™ Thermal Cycler		●	●	●		●		
C1000Touch™ Thermal Cycler		●	●	●		●		
iCycler iQ™ Thermal Cycler	●	●	●					
iQ4™ Thermal Cycler	●	●	●					
iQ5™ Thermal Cycler	●	●	●					
MyCycler™ Thermal Cycler	●	●	●					
Chromo4™		●		●				
Opticon™, Opticon2™				●				
BaseStation™				●				
Corbett Research®/Qiagen®								
Palm Cycler 96-well		●						
Palm Cycler 384-well				●				
Eppendorf®								
Mastercycler® nexus	●	●						
Mastercycler® ep realplex		●	●			●		
Mastercycler® gradient	●	●		●				
Mastercycler® ep gradient	●	●	●	●				
Mastercycler® pro	●	●		●				
Ericom®								
Deltacycler			●	●				
SingleBlock			●	●				
TwinBlock			●	●				
MWG®								
Primus 96-well		●		●				
Primus 384-well						●		
The Q-Lifecycler		●	●	●				
Roche®								
Lightcycler® 96 System							●	
Lightcycler® 480 System							●	●
Stratagene®/Agilent®								
AriaMx Real-Time PCR System				●				
Mx3000P™	●	●						
Mx3005P™	●	●	●	●				
Mx4000™	●	●	●					
Gradient Cycler		●		●				
Robocycler 384-well						●		
Techne®								
Cyclogene		●		●				
Flexigene		●	●	●				
Genius/Genius Quad		●	●	●				
OMN-E		●	●					
PCR Express	●	●	●			●		
Primus 96		●						
Px2/PxE		●	●			●		
Quantica			●	●				
TC412/TC512		●		●		●		
Touchgene/Touchgene Gradient		●	●	●	●			

SARSTEDT



Adhesive sealing films and foils

Specially designed foil materials are required for hermetically sealing polypropylene, polystyrene and polycarbonate micro test plates, to prevent evaporation and to protect the samples during the application and while the samples are being stored or delivered.
A variety of Sarstedt sealing films and foils are available that have been specifically developed for the demands of PCRs, substance storage, and of high throughput screening. They are all produced under cleanroom conditions to prevent contamination with DNase/RNase and nucleic acids. All films and foils are compatible with aqueous solutions and organic solvents such as DMSO, acetonitrile and methanol.

Highly transparent adhesive film for quantitative PCR • **95.1999**

This 50 µm thin film is coated with a streak-free, transparent adhesive. At room temperature, its adhesive properties are minimal, which facilitates handling. Strong adhesion takes places only when the film is pressed down or through the thermal effect of the PCR process, leading to minimal evaporation losses.

- Highly transparent film tailored to the needs of real-time PCR and other fluorescence-based applications
- Secure sealing due to use of innovative adhesive
- Does not stick to skin or gloves

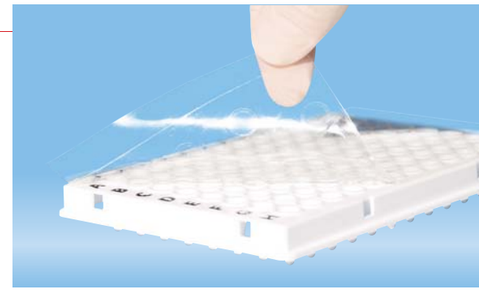
Transparent adhesive film for PCR • **95.1994**

- Clear film for standard (and real-time) PCR
- Ideal for storage of sample materials at temperatures as low as -70°C

Transparent adhesive film for qPCR • **95.1993**

The film consists of a 50-µm-thin, highly transparent polyester film, coated with a special adhesive.

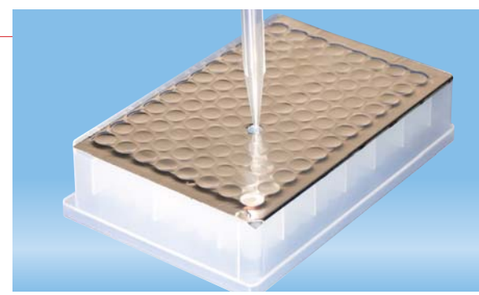
- High transparency
- Effective protection against evaporation



Adhesive aluminium foil for PCR and sample storage • **95.1995**

This heat-resistant, strong but pierceable 38-µm aluminium foil offers impressively high protection against evaporation and resistance to solvents. Perforated side tabs can easily be removed once it has been applied.

- Aluminium foil can be pierced, for example with pipette tips
- Ideal for storage of sample materials/substances at temperatures as low as -70°C



Ordering information

Order no.	Product description	Application	Special properties	Clear	Pierceable	Functional temperature range	Packaging
95.1993	Transparent PCR and qPCR film	PCR, real-time PCR	Thin material, highly transparent	+	No	-40°C to 120°C	100 films/inner box
95.1994	Transparent PCR and qPCR film	PCR, sample storage	Highly adhesive, high chemical resistance	+	No	-70°C to 105°C	100 films/inner box
95.1995	Adhesive aluminium foil	Sample storage, PCR	Pierceable, protects samples from light, high chemical resistance	-	Yes	-70°C to 105°C	100 films/inner box
95.1999	Adhesive, highly transparent qPCR film	Real-time PCR, fluorescence analyses	Highly transparent, heat-sensitive adhesive, minimizes evaporation rates	+	No	-80°C to 100°C	100 films/inner box
95.2092	Transparent tape with pattern adhesive	qPCR, PCR, cold storage, HPLC, autosampling, HTS	Adhesive-free zones, optically clear, easy to pierce	+	yes	-80°C to 120°C	100 tapes/ inner case
95.2093	Silicone mat with pattern adhesive pre-scored	Storage, HPLC, autosampling	Adhesive-free zones, superior resealability after multiple injections	+	yes	-80°C to 120°C	20 mats/ inner case

Which foil is right for my application?

	Film/foil properties	Order no.
Real-time PCR (qPCR)	Encapsulated adhesive	95.1999
	Standard film	95.1993
End-point PCR	Aluminium, pierceable	95.1995
	Transparent, highly adhesive	95.1994
Sample storage	Aluminium, pierceable	95.1995
	Transparent, highly adhesive	95.1994

Low binding micro tubes

As the trend towards decreasing volumes continues, it is increasingly important to minimize any interactions between the analytes and the tubes used. Sarstedt has therefore developed micro tubes and screw cap micro tubes that ensure a maximum recovery rate to meet the requirements of protein and DNA analytics. Minimizing sample loss – especially for costly and valuable reagents – is essential to save costs, achieve accurate analysis results, and ensure secure storage over a long period of time.

Special high-quality plastics are used for Sarstedt low binding vessels. A repellent coating, for example with silicones, which could falsify the analyses is not necessary.

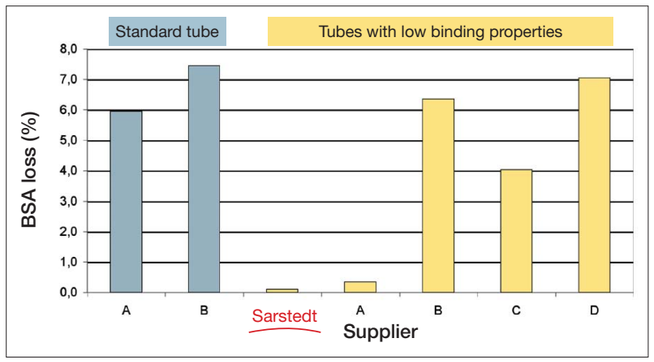
Product benefits of the low binding micro tubes at a glance:

- Available in three sizes – 0.5 ml, 1.5 ml and 2.0 ml
- Durable – Low protein binding tubes can be centrifuged up to 20,000 × g*, Low DNA binding tubes can be centrifuged up to 30,000 × g* (2 ml up to 25,000 × g*)
- Certified PCR Performance Tested quality – DNA-free, DNase/RNase-free and free from PCR inhibitors
- Convenient small pack sizes – 50 tubes in a resealable bag to reduce risk of contamination

**Filled with demineralized water (low surface tension) up to nominal volume, at 20°C for 90 minutes in a fixed-angle rotor.*

PCR Performance-Tested quality:
✓ DNA-free ✓ Free of DNase/RNase ✓ Free of PCR inhibitors

Low protein binding – comparison of mean BSA losses:



Experiment method:

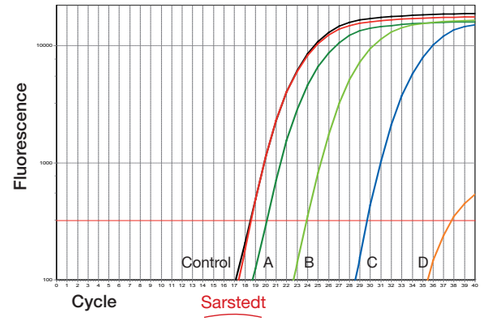
Ten test tubes each from various suppliers were filled with an aqueous solution of BSA at a concentration of 10 µg/ml in water and stored at 4°C. After incubation over 24 hours, the BSA solution was removed and the concentration was determined using a Bradford assay (Zor, T. and Selinger, 1996, Anal. Biochem. 236, pp. 302–308).

Percentage losses were calculated based on the mean value across the 10 tubes tested.

SARSTEDT

SafeSeal reaction tubes with safety cap

Low DNA binding – comparison of DNA losses:



Experiment method:

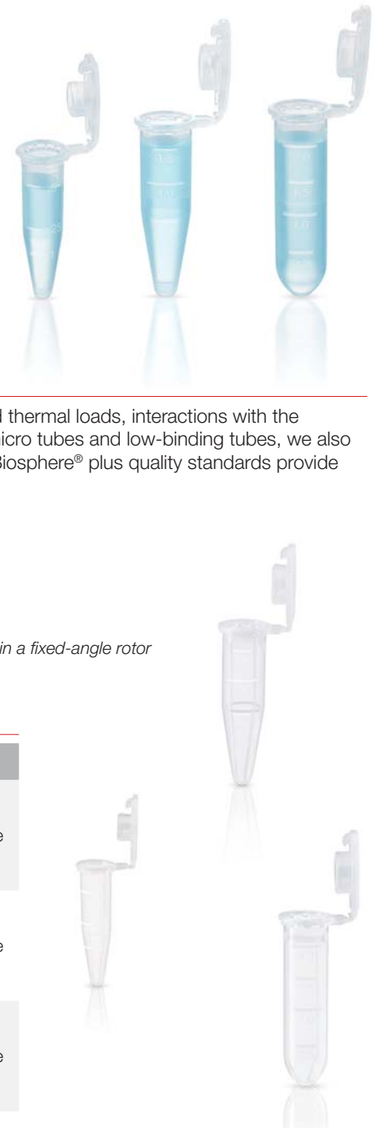
Ten test tubes each from various suppliers were filled with 100 µl of a plasmid DNA solution (concentration: 10^5/µl) and shaken at 37°C.
After an incubation period of 3 hours, the DNA content was determined using real time PCR.

One of the ten test series is shown in this diagram as an example.

Control — Sarstedt — Supplier A — Supplier B — Supplier C — Supplier D

Ordering information

Volume	Order no.	Description		Packaging
0.5 ml	72.704.600	Low protein-binding	PCR	50 units/bag 300 units/inner case 1,200 units/box
	72.704.700	Low DNA-binding		
1.5 ml	72.706.600	Low protein-binding	PCR	50 units/bag 200 units/inner case 800 units/box
	72.706.700	Low DNA-binding		
2.0 ml	72.695.600	Low protein-binding	PCR	50 units/bag 200 units/inner case 800 units/box
	72.695.700	Low DNA-binding		



SafeSeal micro tubes

The demands on micro tubes are varied: they must be able to withstand mechanical and thermal loads, interactions with the analytes should be minimized, and biological purity is a priority. In addition to standard micro tubes and low-binding tubes, we also offer SafeSeal versions for use under thermal loads. Our PCR Performance Tested and Biosphere® plus quality standards provide certified purity.

- Retaining cams ensure cap is firmly sealed, even under thermal load
- Wide cap connection for straightforward and accurate sealing
- Large labelling area on cap
- Can be centrifuged up to 30,000 x g* (2.0 ml up to 25,000 x g*)

**Filled with demineralized water (low surface tension) up to nominal volume, at 20°C for 90 minutes in a fixed-angle rotor*

Ordering information

Volume	Order no.	Purity Grade	Packaging
0.5 ml	72.704.200		50/bag • 250/inner case • 500/case
	72.704.201*		Individually wrapped • 50/inner case • 100/case
	72.704.400	PCR	250/bag • 500/inner case • 2,000/case
1.5 ml	72.706.200		50/bag • 250/inner case • 500/case
	72.706.201		Individually wrapped • 60/inner case • 120/case
	72.706.400	PCR	250/bag • 1,000/inner case • 2,000/case
2.0 ml	72.695.200		50/bag • 250/inner case • 500/case
	72.695.201		Individually wrapped • 60/inner case • 120/case
	72.695.400	PCR	250/bag • 1,000/inner case • 2,000/case

**Available on request*

SARSTEDT

96-well MegaBlock®

The 96-well MegaBlock® meets all important requirements for the processing of samples up to a volume of 2.2 ml in automated systems or for storage of retention samples.

- Alphanumeric labeling of wells
- Highly reliable – each well is checked
- Free of human DNA, DNase/RNase and free of pyrogens/endotoxins
- Ideal for long-term storage of samples
- Also suitable for heat sealing systems
- Films and mats are available for covering
- 0.5 ml and 1.2 ml sizes have raised wells

MegaBlock® 0.5/1.2/2.2 ml, PP

- For the storage of pharmaceutical samples
- For DNA isolation, enzyme assays and cell culture applications
- Solvent-resistant, including against DMSO
- Autoclavable*

MegaBlock® 1.2 ml, PS clear

- Ideal for long-term storage of blood samples
- Made from highly transparent and crystal-clear polystyrene
- Allows for easy visual inspection of the wells

MegaBlock®

Order no.	Design	Volume/material	Units/bag Units/case
82.1969.002	Round, raised wells	0.5 ml PP	7/56
82.1970.002	Round, raised wells	1.2 ml PS transparent	-/32
82.1971.002	Round, raised wells	1.2 ml PP	-/32
82.1972.002	Square wells, round base	2.2 ml PP	-/32

Sealing mats and film for MegaBlock®

Order no.	Design	Units/bag Units/case
95.1990.002	Sealing mats for MegaBlock®, pierceable, suitable for round wells	10/250
95.1991.002	Sealing mats for 2.2 ml MegaBlock®, suitable for 82.1972.002	10/250
82.1586	Acetate film, transparent	100/1,000

**Products made of PP can be autoclaved up to 121°C without any appreciable loss of mechanical properties. The user must check whether other product characteristics are affected in terms of the desired use.*

SARSTEDT

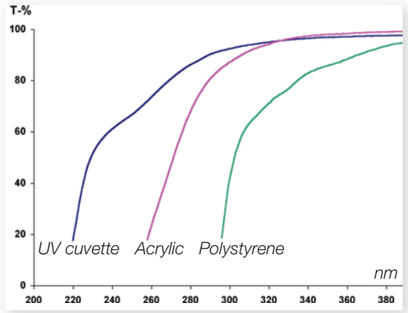
The plastic material of the UV cuvette enables measurements in the UV range at wavelengths of 220 nm upwards. Disposable cuvettes prevent the contamination that can arise in quartz cuvettes due to washing processes. In addition to non-certified UV cuvettes, certified UV cuvettes are also available. Individually sealed with a cap. All UV cuvettes are packed in Styrofoam racks to avoid scratches.

Typical applications and product features

- Photometric quantification of nucleic acids at 260 nm and of proteins at 280 nm
- Minimal absorption in the UV range
- Suitable for photometers with a light center height (LCH) of 8.5 mm and 15 mm: Eppendorf Biophotometer, ThermoSpectronic, Perkin Elmer, Bio-Rad, Analytik Jena, etc.
- Uniform and precise clarity reduces absorbance variability
- Economical compared to quartz cuvettes
- Certified DNA/RNase/protein-free options individually sealed with lids are available. The lid protects against contamination and allows samples to be stored directly in the cuvette.

The UV cuvette is particularly suitable for use in nucleic acid or protein quantification due to low self-absorption properties in the low wavelength range.

Transmission depending on the wavelength



UV cuvette
Acrylic
Polystyrene

Wavelength (nm)	Transmission (T) in %		
	UV	Acrylic	Polystyrene
260	73 %	23 %	0 %
280	86 %	68 %	0 %
313	94 %	93 %	66 %
334	96 %	97 %	79 %
366	97 %	98 %	90 %
405	98 %	99 %	95 %
560	98 %	99 %	96 %

Method:
The graph and the table display the precise light transmission of the cuvette depending on the different wavelengths and the different plastic types. Cuvettes each filled with distilled, clear water. Optical path length: 10 mm

Technical specifications

Minimum sample volume:	50 µl
Optical path length:	10 mm
Basic absorbance:	at 260 nm ≤ 0.134 E at 280 nm ≤ 0.065 E
External dimensions (W x D x H):	12.5 x 12.5 x 45 mm
Photometer and centre height (CH):	8.5 mm and 15 mm

Ordering information for UV micro cuvette

Order no.	Height in mm	LCH	Clear sides	Units/Styrofoam rack/case
67.758	45	8.5 mm	2	100/400
67.758.001	45	8.5 mm	2	100/400 Individually sealed with lid, DNA-/RNase-/protein-free
67.759	45	15 mm	2	100/400
67.759.001	45	15 mm	2	100/400 Individually sealed with lid, DNA-/RNase-/protein-free

SARSTEDT

Notes

Notes

If you have any questions, we'll be happy to help!

Visit our website: www.sarstedt.com

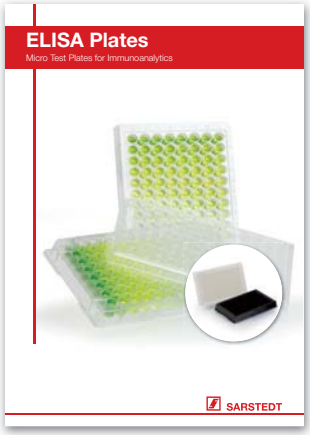
Brochure 537

Brochure 471

Brochure 215

Brochure 779

Brochure 683



Brochure 681

SARSTEDT

Technical modifications reserved

This document may contain information on products that may not be available in particular countries

25_362_0200_501

Sarstedt, Inc.
1025 St. James Church Road
P.O. Box 468
Newton, NC 28658 - 0468
Tel: +1-828-465-4000
Toll free: +1-800-257-5101
Fax: +1-828-465-4003
customerservice.us@sarstedt.com
www.sarstedt.com