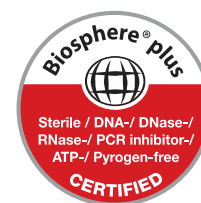
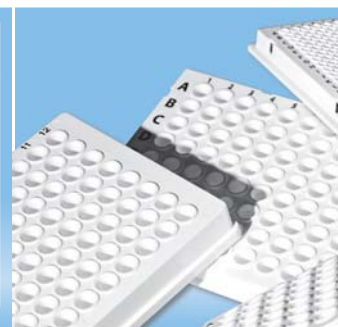
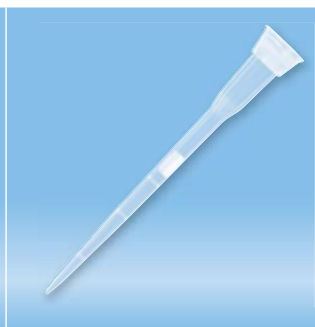


PCR & Molecular Biology

Certified Products for Applications in PCR,
Molecular Biology & Research



Liquid Handling










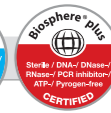
SARSTEDT

SARSTEDT International

Your partner in medicine and science worldwide



For over **50** years

     	Sarstedt quality symbols	A guarantee for reliability and reproducibility	 	P. 4
		PCR Performance Tested Purity Certificate		P. 4
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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 has been 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.

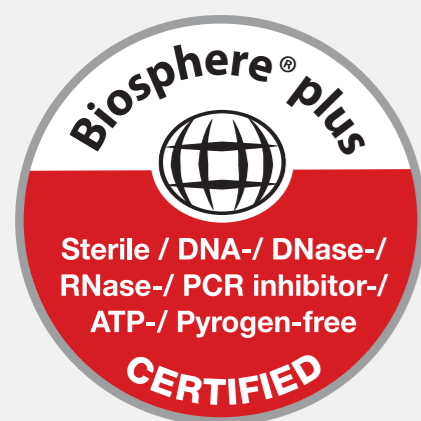
PCR Performance Tested products meet the following purity criteria, which are certified by an independent laboratory:

- ✓ 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

In recent years, 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 than even just a few years ago so that users can be certain that even the smallest contamination will be reliably excluded. The new 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. Furthermore, Biosphere® plus products are ATP-free and non-pyrogenic/endotoxin-free, as well as 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

Calibrated system: Pipette and pipette tips

The accuracy of the pipetting process depends to a large extent on the 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 tip is defined by the properties of the material used (e.g. high resistance to chemicals), the surface properties (e.g. low retention), the design (e.g. graduation rings, reduced aerosol formation), and through optimised accuracy of fit with the relevant 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 offer you the ultimate accuracy and precision even with small volumes, Sarstedt tips are regularly checked in combination with the pipettes of market leading manufacturers (e.g. Eppendorf®, Gilson®). Tips are subjected to comprehensive standard conformity tests in accordance with the international test standard ISO 8655-2 for piston pipettes. We guarantee that our pipette tips form a system with the piston pipettes supplied by the stated manufacturers listed in each case that is matched in terms of accuracy and precision and that does not exceed the error tolerances of ISO 8655-2.

Conformity testing in accordance with the international test standard ISO 8655-2



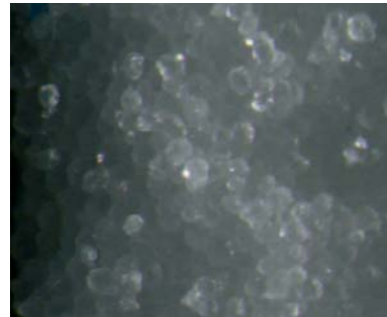
- The declaration of conformity for piston pipettes states the combination(s) of pipette and pipette tip for which it applies, and attests the accuracy and precision. It can be supplied on request.
- The logo shown below indicates whether a declaration of conformity is available for pipette/pipette tip combinations.





Protection against carry-over and contamination

Even the most meticulous pipetting may generate aerosols during aspiration of the sample, which can make their way into the pipette shaft and contaminate the pipette. With many applications (PCR, radioactive, pipetting, etc), contamination of the pipette cannot be tolerated. In order to prevent aerosol contamination along with the resulting consequences (falsified results, additional expenditure in time and cost), Sarstedt incorporates special porous elements in its range of filter tips.

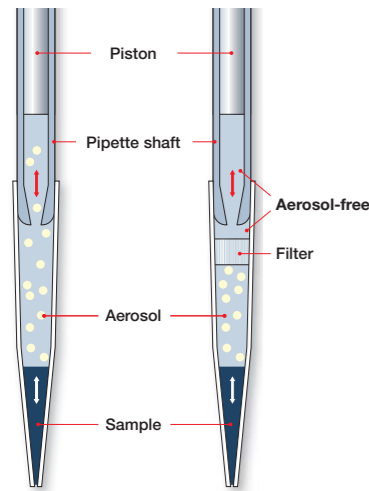


Cross-section of a porous filter element (40x magnification)

Reliable safety with selected filter materials

The filter element integrated in the pipette tips consists of a porous plastic material featuring defined hydrophobic properties and no self-sealing additives.

- The sponge-like material is densely composed of randomly arranged channels (see picture on left), enabling the passage of air required for the desired precision when using piston pipettes.
- The complex structure of the porous filter effectively prevents aerosols from entering the pipette shaft.



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

Both the PCR-based method and indirect, radioactive measurement of the plasmid DNA with P-32 marked ATP are reliable methods for detecting carry-over contamination of pipettes via DNA aerosols, which can occur in practical pipetting applications.

- With both methods, the hydrophobic filter inserts with the selected porosity used in Sarstedt Biosphere® plus filter tips were found to provide protection against aerosol contamination.
- The superior efficiency of the filter in Biosphere® plus filter tips is based on a complex mechanism of absorption, surface properties, thickness, strength and shape.

* Refer to our "Application Report – Shielding Effect of Filter Inserts in Pipette Tips" for additional details.

Added protection with Biosphere® plus purity quality

- Maximum biological purity thanks to the special manufacturing process: Free of DNA, DNase, RNase, PCR inhibitors, ATP and pyrogens
- Batch-specific certification is available upon request

Convenient and safe packaging of individual tip boxes

- Each tip box is aseptically protected in special sterile bag packaging
- Easy opening of the bag packaging without aids via the small tearing notch at the short bag side (see picture)



Superior precision and increased contamination protection thanks to the ShaftProtect tip for Gilson P2/P10

With most extra-long tips, the dead volume of the air cushion is increased, which has a negative impact in terms of precision – but not on the ShaftProtect 70.1131 (see picture), which has been specially developed for Gilson P2/P10.



ShaftProtect filter tip • 0.1 - 10 µl

DE-M

70.1131.210

- Extended tip with ShaftProtect for Gilson P2/P10 to protect the inner tube wall against the generally non-sterile pipette shaft
- Identical precision and accuracy to the short tip 70.1130 thanks to a very small dead volume
- Extremely fine, extra-long design improves dosing of even the smallest volumes
- Easier visual control – calibration rings provide micro volume confirmation
- Conformity tested to ISO 8655-2
- Colour code

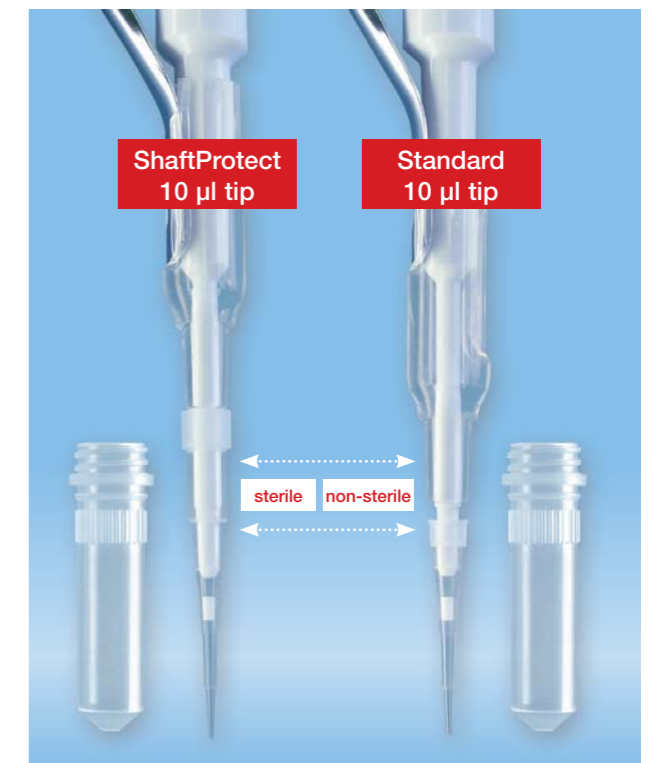
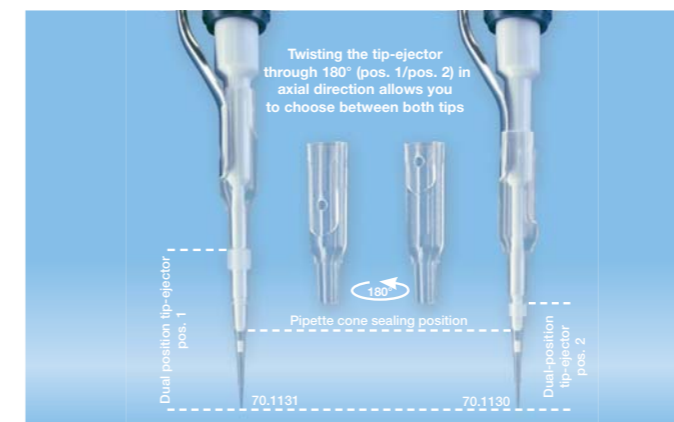


Protected, precise and accurate pipetting into tubes with the ShaftProtect tip for Gilson P2/P10

- **High flexibility & convenient handling**

Through simple repositioning of the dual position tip-ejector* (see illustration), the extended ShaftProtect tip covers as much of the pipette shaft as the short 70.1130.

* Since 2003, P2/P10 pipettors from Gilson are equipped with dual position tip-ejectors, allowing optional use of short tip 70.1130 and "Gilson long" 70.1131. Older P2/P10 models need the Gilson "Service Kit 2".



Pipetting small sample volumes from 0.1 - 20 µl

Working with micro volumes places the highest demands on the pipette/pipette tip dosing system. For this reason, tips up to 10 µl offer the following features to provide enhanced visual control and dosing:

- Conformity tests in accordance with ISO 8655-2
- Calibration rings facilitate visual control of the pipetted volume
- Fine, extended tips facilitate dosing and visual volume control
- Colour-coded trays enable easy tip volume identification
- Highly transparent tip material for enhanced pipetting control

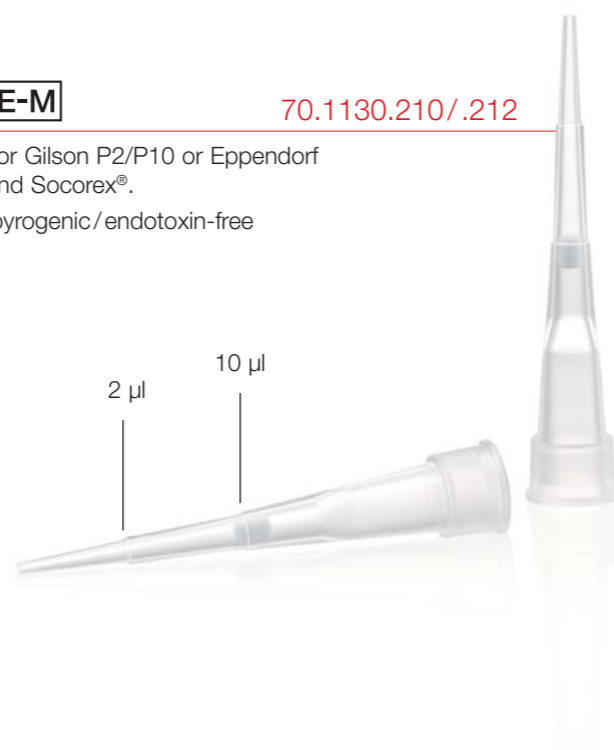
Filter tip • 0.1 - 10 µl / 0.1 - 2.5 µl

DE-M

70.1130.210/.212

Pipette tip with extremely fine, tip and calibration rings in 2 and 10 µl for Gilson P2/P10 or Eppendorf Research® 2.5 µl, or identical designs e.g. from Finnpipette®, Biohit® and Socorex®.

- Sterile, free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic/endotoxin-free
- Conformity tested to ISO 8655-2
- Colour code



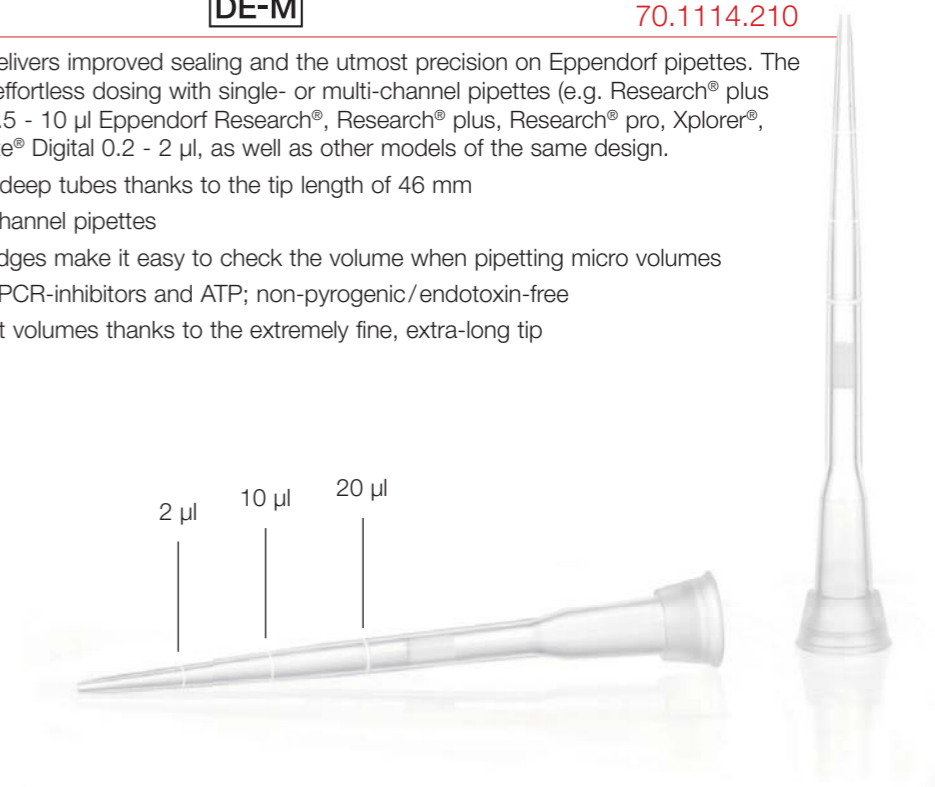
Filter tip • 0.1 - 20 µl

DE-M

70.1114.210

The ergonomic and flexible cone tip delivers improved sealing and the utmost precision on Eppendorf pipettes. The cone geometry enables optimal fit and effortless dosing with single- or multi-channel pipettes (e.g. Research® plus pipettes). Suitable for 0.1 - 2.5 µl and 0.5 - 10 µl Eppendorf Research®, Research® plus, Research® pro, Xplorer®, Reference® 2 - 20 µl and e.g. Finnpipette® Digital 0.2 - 2 µl, as well as other models of the same design.

- Protected pipetting to the bottom of deep tubes thanks to the tip length of 46 mm
- Cone geometry optimised for multi-channel pipettes
- Calibration rings without interfering ridges make it easy to check the volume when pipetting micro volumes
- Sterile, free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic/endotoxin-free
- Improved dosing of even the smallest volumes thanks to the extremely fine, extra-long tip
- Conformity tested to ISO 8655-2
- Colour code



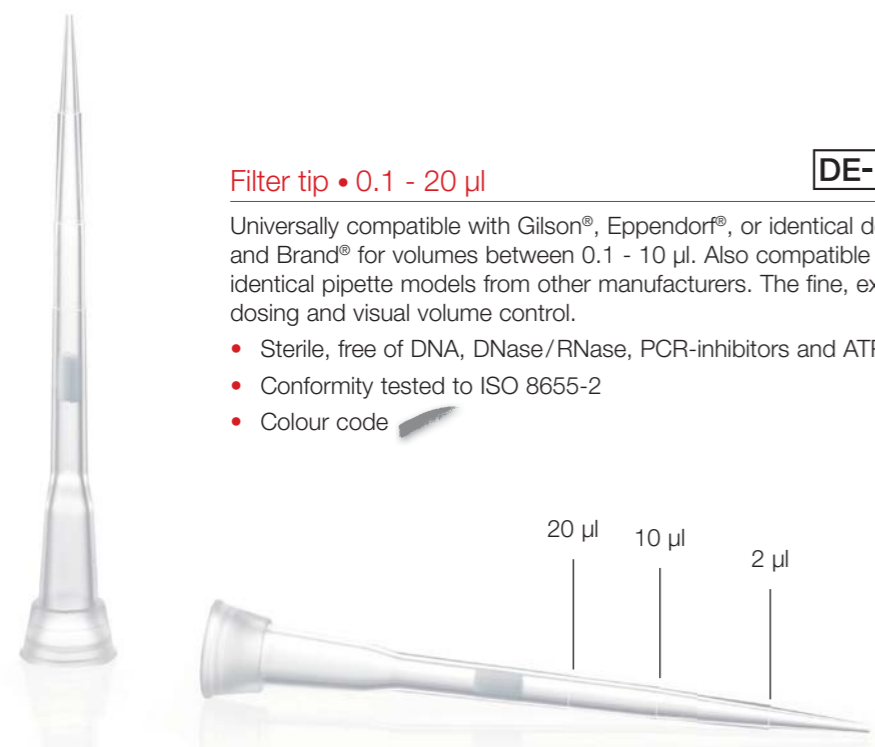
Filter tip • 0.1 - 20 µl

DE-M

70.1116.210

Universally compatible with Gilson®, Eppendorf®, or identical designs from e.g. Biohit®, Finnpipette®, Abimed® and Brand® for volumes between 0.1 - 10 µl. Also compatible with Eppendorf Reference 2 - 20 µl and identical pipette models from other manufacturers. The fine, extra-long tip and calibration rings facilitate dosing and visual volume control.

- Sterile, free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic/endotoxin-free
- Conformity tested to ISO 8655-2
- Colour code



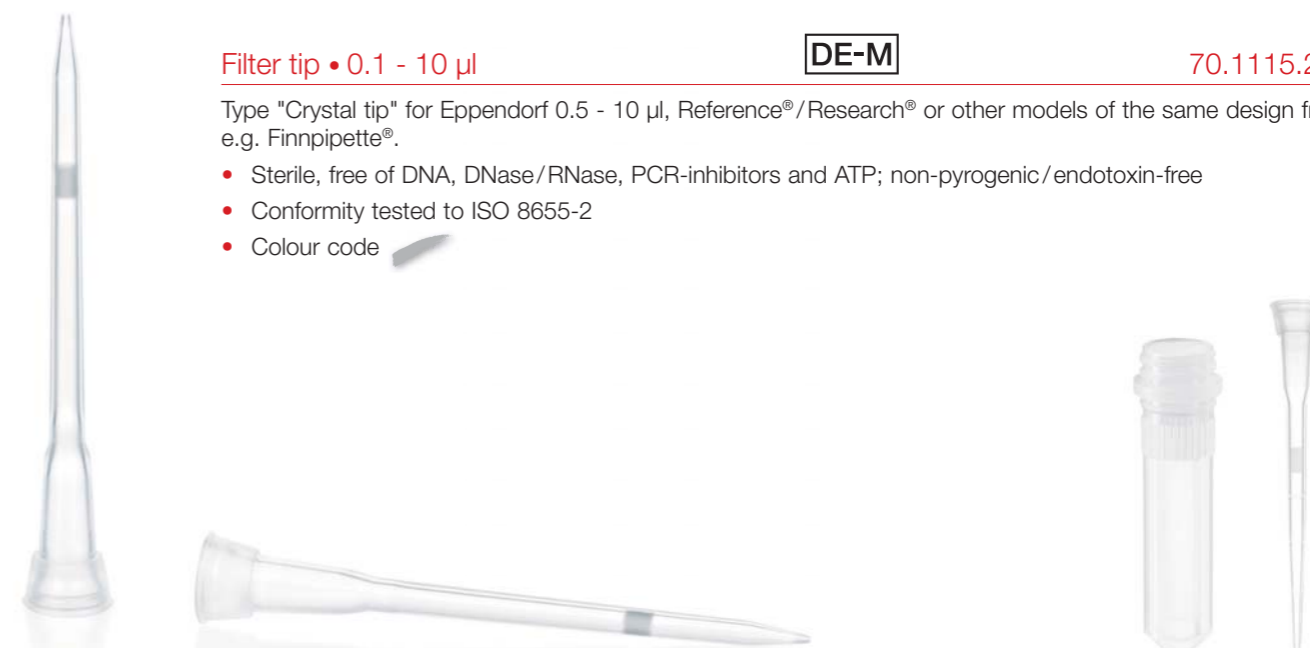
Filter tip • 0.1 - 10 µl

DE-M

70.1115.210

Type "Crystal tip" for Eppendorf 0.5 - 10 µl, Reference®/Research® or other models of the same design from e.g. Finnpipette®.

- Sterile, free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic/endotoxin-free
- Conformity tested to ISO 8655-2
- Colour code



Pipetting sample volumes up to 300 µl

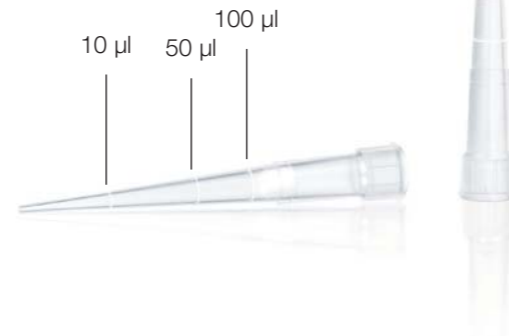
Filter tip • 2 - 100 µl

DE-M

70.760.212/ .213

Standard pipette tip for pipettes from Eppendorf®, Gilson®, Biohit®, Brand®, Socorex® and identical designs, plus additional filter tip option with a volume of 20 µl (70.760.213). Calibration rings allow easy visual volume control.

- Sterile, free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic/endotoxin-free
- Conformity tested to ISO 8655-2
- Colour code



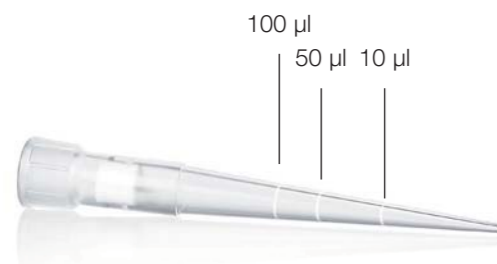
Filter tip • 2 - 200 µl

DE-M

70.760.211

Standard pipette tip for pipettes from Eppendorf®, Gilson®, Biohit®, Finnpiquette®, Socorex® and identical designs. Calibration rings allow easy visual volume control.

- Sterile, free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic/endotoxin-free
- Conformity tested to ISO 8655-2
- Colour code



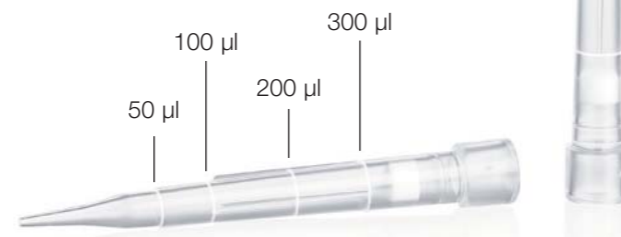
Filter tip • 10 - 300 µl

DE-M

70.765.210

Specially suited for multi-channel pipettes, e.g. from Gilson®, Eppendorf®, Brand®, Finnpiquette®, Biohit®. Also compatible with older multi-channel pipettes up to 200 µl. 55.6 mm tip with 4 graduations for visual control of pre-set pipetting volume at 50, 100, 200 and 300 µl.

- Sterile, free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic/endotoxin-free
- Conformity tested to ISO 8655-2
- Colour code

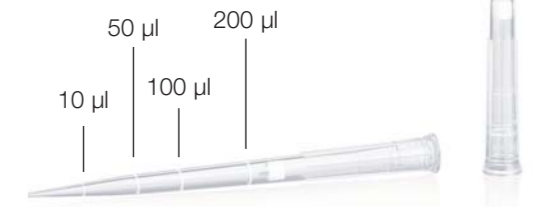


Filter tip • 1 - 200 µl, extra long

70.1189.215

Extra long and narrow 200 µl tip designed for universal use on Eppendorf Reference®, Research®, Biohit mLine®, -Proline®, HTL, Labnet®, Finnpiquette®, Nichiryo® Benchmate, Gilson®, Rainin®, CappAero, CappTronic® Electronic and identical model pipettes.

- Soft, flexible cone for easy assembly and ejection
- 77 mm length for reaching into tubes
- Graduation rings without interfering ridges at 10, 50, 100 and 200 µl for easy visual checking of the defined pipetting volume
- Sterile, free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic/endotoxin-free
- Colour code



NEW

Gel loader pipette tip • 1 - 200 µl

70.1190.100

- Fine, extra-long capillaries
- Easy filling of Agarose or SDS gels
- Compatible with all standard pipettes



Pipetting large sample volumes up to 1,250 µl

- Highly transparent tip material for enhanced pipetting control
- Sterile, free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic/endotoxin-free
- Colour-coded trays enable easy tip volume identification

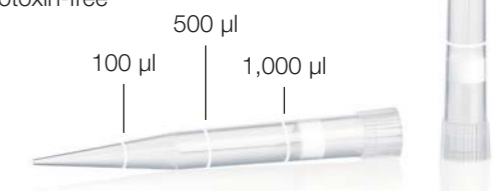
Filter tip • 50 - 1,000 µl

DE-M

70.762.211

Standard tip for Eppendorf®, Gilson®, Finnpiquette®, Biohit®, Brand®, Socorex® and identical designs.

- Graduation rings at 100, 500 and 1,000 µl
- Sterile, free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic/endotoxin-free
- Conformity tested to ISO 8655-2
- Colour code

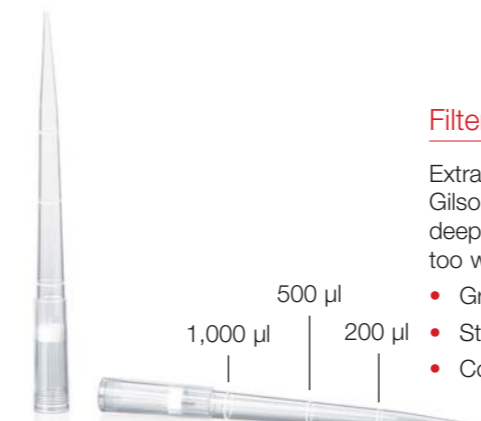


Filter tip • 50 - 1,250 µl, extra long

70.1186.210

Extra long (103 mm) and slim pipette tip, universally suited for pipettes e.g. from Eppendorf®, Gilson®, Biohit®, Nichiryo® and Finnpiquette®. Particularly recommended for applications in deep well blocks, cluster tubes or 5 ml CryoPure tubes for which the traditional 1,000 µl tip is too wide.

- Graduation rings at 200, 500 and 1,000 µl.
- Sterile, free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic /endotoxin-free
- Colour code





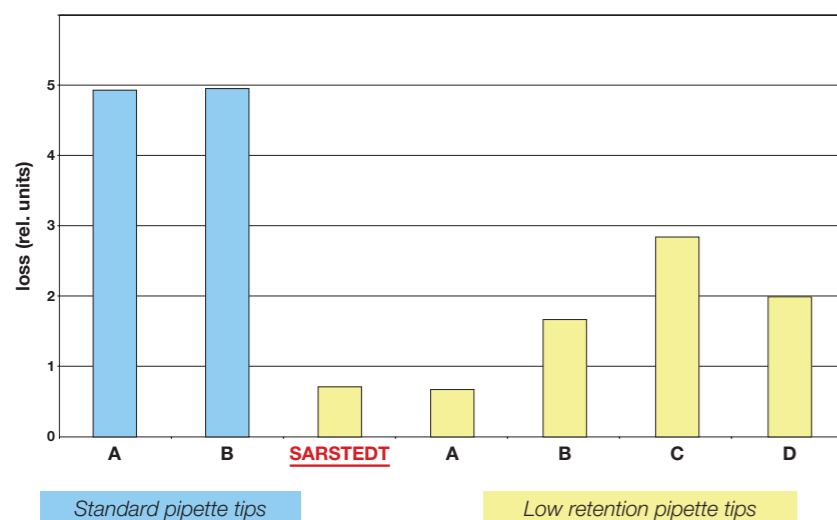
Improved sample recovery thanks to low retention surface



Analytical methods in the lab are becoming increasingly more sensitive. When working with DNA and RNA, it is essential that high reproducibility of results is achieved.

With the new low retention pipette tips from Sarstedt, the amount of sample recovered during pipetting is increased to prevent small residual amounts of the sample from remaining in the pipette tip. Low retention tips also reduce loss of expensive reagents. In addition, the transfer performance with viscous fluids (e.g. buffer solutions containing detergents or fluids containing glycerine) 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 (H₂O; 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.

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

Product	Order no.	Volume	Description	Packaging
Type E	70.1130.217	2.5 µl		96/box, 480/inner case, 1,920/case
Type E	70.1130.215	10 µl		96/box, 480/inner case, 1,920/case
Type N	70.1114.215	20 µl		96/box, 480/inner case, 1,920/case
Type J	70.1116.215	20 µl		96/box, 480/inner case, 1,920/case
Type A	70.760.219	20 µl		96/box, 480/inner case, 1,920/case
Type A	70.760.217	100 µl		96/box, 480/inner case, 1,920/case
Type C	70.760.216	200 µl		96/box, 480/inner case, 1,920/case
Type L	70.765.215	300 µl		96/box, 480/inner case, 1,920/case
Type B	70.762.216	1,000 µl		100/box, 500/inner case, 1,000/case

Ordering information – Low retention pipette tips without filter

Product	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

Tip SystemBox – the central pipetting station

Simple and practical

Flexible and cost-effective
Empty 96-tip reloading trays and bulk tips
Suitable for manually racking bulk tips for autoclaving and convenient handling.

Cost-effective and eco-friendly
Tip StackPack
Stacked packaging
Efficient handling of the 96-tip trays, reduced packaging and storage space in the Tip SystemBox



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 accommodates refill trays from Tip StackPack or empty trays for reloading.

Order no.	Design	Packaging Pcs./case
95.1298.001	Tip SystemBox, empty	6

Empty reloading trays for use in the Tip SystemBox

Users purchasing bulk tips can load tips into empty trays (grey, yellow, orange) in the Tip SystemBox.

- Place empty trays into the Tip SystemBox and load with tips.
- Autoclave tips in the Tip SystemBox, if required.

Ordering information for empty reloading trays – tip volume identification via colour-coded trays

Order no.	Tray colour code	Tip type/volume	Packaging Pcs./case
95.1760.011		A, C / 200 µl	25
95.1760.022		D, J, N / 20 µl	25
95.1760.033		E long / 10 µl	25
95.1760.034		E / 10 µl	25
95.1760.044		L / 300 µl	20

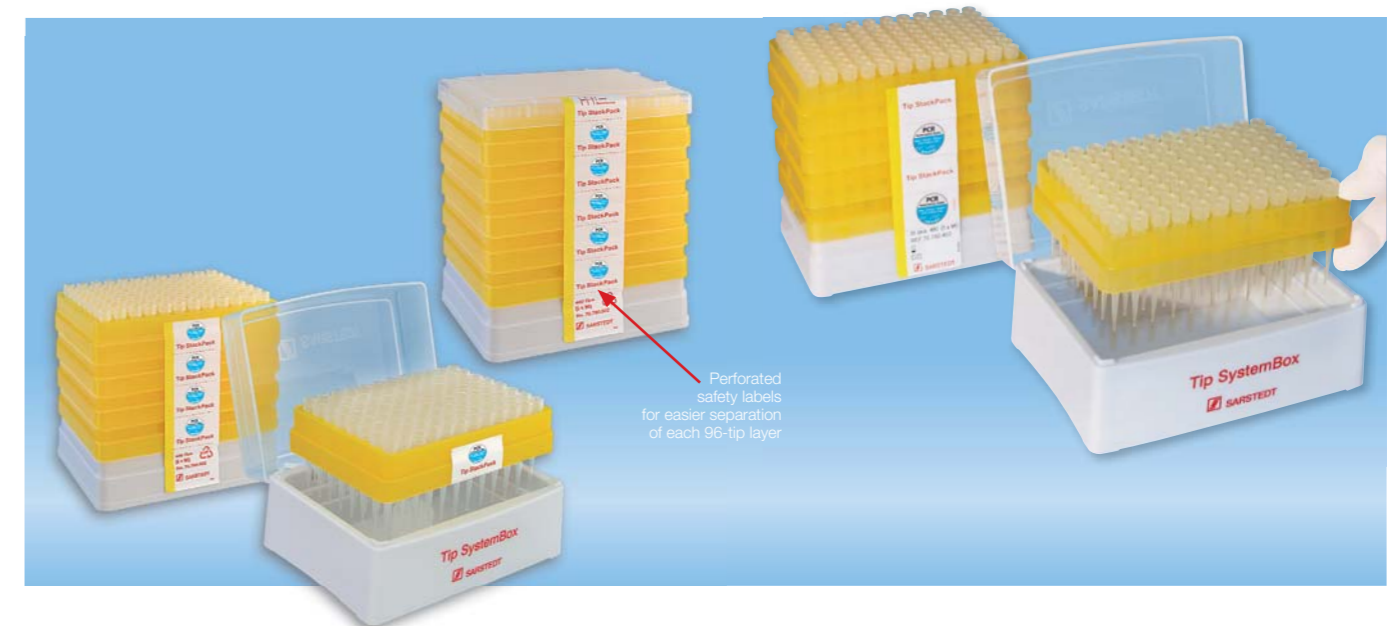
Tip StackPack reload system

Tips are preloaded in reusable trays of 96 tips each stacked on top of each other, reducing packaging waste and storage space by more than 50%

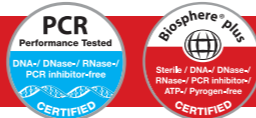
- Cost-effective and eco-friendly
- Space-saving
- Easy to use
- Reduced waste volumes
- Easy transfer of individual layers of 96-tip trays into the Tip SystemBox for autoclaving and easy handling
- Safety labels applied on both sides can be easily perforated to access the next layer of tips
- No adjustment aids required for insertion of a layer of 96 tips into 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	Description	Packaging
70.1130.600	10 µl		576/StackPack, 2,304/case
70.1130.460	10 µl		576/StackPack, 2,304/case
70.760.502	200 µl		480/StackPack, 1,920/case
70.760.452	200 µl		480/StackPack, 1,920/case
70.760.501	250 µl		480/StackPack, 1,920/case
70.760.451	250 µl		480/StackPack, 1,920/case



Ordering information for quality pipette tips with filter



Filter tips (Pictures 100%)	Colour code Tray	Order number	Max. sample volume/colour	Quality 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
	Type E	70.1130.410			480/bag (loose), 4,800/case
	Type E long	70.1131.210	10 µl, transparent		96/box, 480/inner case, 1,920/case
	Type D	70.1115.210	10 µl, transparent		96/box, 480/inner case, 1,920/case
	Type D	70.1115.410			480/bag (loose), 4,800/case
	Type N	70.1114.210	20 µl, transparent		96/box, 480/inner case, 1,920/case
	Type N	70.1114.410			480/bag (loose), 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
	Type A	70.760.413			480/bag (loose), 4,800/case
	Type A	70.760.212	100 µl, transparent		96/box, 480/inner case, 1,920/case
	Type A	70.760.412			480/bag (loose), 4,800/case
	Type O extra long 1:2	70.1189.215	200 µl, transparent		96/box, 960/case
	Type C	70.760.211	200 µl, transparent		96/box, 480/inner case, 1,920/case
	Type C	70.760.411			480/bag (loose), 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
	Type B	70.762.411			200/bag (loose), 2,000/case
	Type M 1:2	70.1186.210	1,250 µl, transparent		96/box, 768/case
	Type M 1:2	70.1186.410			384/bag (loose), 3,840/case

Ordering information for quality pipette tips without filter



Tips without filter (Pictures 100%)	Colour code Tray	Order number	Max. sample volume/colour	Quality Grade	Packaging
	Type E	70.1130	10 µl, transparent		1,000/bag, 10,000/case
	Type E	70.1130.100			96/box, 1,920/case
	Type E	70.1130.200			96/box, 480/inner case, 1,920/case
	Type E	70.1130.600	10 µl, transparent		96/tray, 576/StackPack, 2,304/case
	Type E	70.1130.460			96/tray, 576/StackPack, 2,304/case
	Type E long	70.1131	10 µl, transparent		500/bag, 10,000/case
	Type E long	70.1131.100			96/box, 1,920/case
	Type D	70.1115	10 µl, transparent		1,000/bag, 10,000/case
	Type D	70.1115.100			96/box, 1,920/case
	Type D	70.1115.200			96/box, 480/inner case, 1,920/case
	Type N	70.1114	20 µl, transparent		1,000/bag, 10,000/case
	Type N	70.1114.100			96/box, 1,920/case
	Type N	70.1114.200			96/box, 480/inner case, 1,920/case
	Type J	70.1116	20 µl, transparent		1,000/bag, 10,000/case
	Type J	70.1116.100			96/box, 1,920/case
	Type J	70.1116.200			96/box, 480/inner case, 1,920/case
	Type A	70.760.002	200 µl, transparent		500/bag, 10,000/case
	Type A	70.760.012	200 µl, yellow		500/bag, 10,000/case
	Type A	70.760.102	200 µl, transparent		96/box, 1,920/case
	Type A	70.760.202	200 µl, transparent		96/box, 480/inner case, 1,920/case
	Type A	70.760.502	200 µl, transparent		96/tray, 480/StackPack, 1,920/case
	Type A	70.760.452	200 µl, transparent		96/tray, 480/StackPack, 1,920/case
	Type O extra long 1:2	70.1189.105	200 µl, transparent		96/box, 960/case
	Gelloader 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
	Type C	70.760.201			96/box, 480/inner case, 1,920/case
	Type C	70.760.501			96/tray, 480/StackPack, 1,920/case
	Type C	70.760.451	300 µl, transparent		96/tray, 480/StackPack, 1,920/case
	Type L	70.765			500/bag, 5,000/case
	Type L	70.765.100	300 µl, transparent		96/box, 1,920/case
	Type L	70.765.200			96/box, 480/inner case, 1,920/case
	Type B	70.762	1,000 µl, transparent		250/bag, 5,000/case
	Type B	70.762.010	1,000 µl, blue		250/bag, 5,000/case
	Type B	70.762.100	1,000 µl, transparent		100/box, 1,000/case
	Type B	70.762.200	1,000 µl, transparent		100/box, 500/inner case, 1,000/case
	Type M 1:2	70.1186	1,250 µl, transparent		384/bag, 3,840/case
	Type M 1:2	70.1186.100			96/box, 3,840/case
	Type M 1:2	70.1186.200			96/box, 768/case
	Type M 1:2	70.1183.001	5 ml		250/bag, 2,500/case
	Type M 1:2	70.1183.101			50/box, 500/case
	Type M 1:2	70.1183.002	5 ml		250/bag, 2,500/case
	Type M 1:2	70.1183.102			50/box, 500/case
	Type M 1:2	70.1187.001	10 ml		200/bag, 2,000/case
	Type M 1:2	70.1187.101			25/box, 250/case



The quality concept for automated liquid handling

- Every production batch is checked for functionality and precision on Biomek platforms to ensure consistently high product quality
- All tips are free of human DNA, DNase and RNase
- Sterile tips are also non-pyrogenic/endotoxin-free
- Colour coding of the boxes enables fast identification of tips and volumes

Pipette tips for Biomek 1000 · 2000

Product	Volume	Colour code Tray	Tip with filter, sterile	Tip without filter, non-sterile	Tip without filter, sterile	Packaging
	20 µl		70.1140.211	----	----	96/rack 4,800/case
	20 µl		----	70.1140.101	70.1140.201	96/rack 4,800/case
	175 µl		70.1142.211	----	----	96/rack 4,800/case
	250 µl		----	70.1142.101	70.1142.201	96/rack 4,800/case

Pipette tips for Biomek FX^(P)/NX^(P) · 3000 · 4000

Product	Volume	Colour code Tray	Tip with filter, sterile	Tip without filter, non-sterile	Tip without filter, sterile	Packaging
	20 µl		70.1140.212	----	----	96/rack 4,800/case
	20 µl		----	70.1140.102*	70.1140.202	96/rack 4,800/case
	35 µl		70.1141.212	----	----	96/rack 4,800/case
	50 µl		----	70.1141.102	70.1141.202	96/rack 4,800/case
	175 µl		70.1142.212	----	----	96/rack 4,800/case
	250 µl		----	70.1142.102	70.1142.202	96/rack 4,800/case

Important notice on autoclaving:

Products made of PP can be autoclaved at temperatures up to 121°C without significant losses in terms of mechanical properties. It is the responsibility of the user to check whether other product properties are influenced in terms of the desired application.

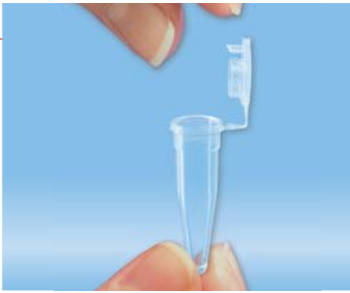
The original Multiply® tubes are the result of consistently improving the design of the more traditional reaction tubes. Multiply® PCR tubes are designed for easy use and to reduce contamination risks.

Integrated anti-contamination shield:

Prevents accidental contact with the inner surface of the lid during opening

Easy and safe to open:

The anti-contamination shield prevents unintentional contamination.



Lid geometry tailored to the application:

Frosted flat lid with large area for labelling

The frosted area for labelling prevents the writing from smearing in the thermocycler. The lid geometry allows the full heating block capacity to be utilised.



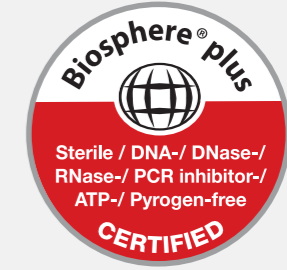
Optimised for PCR

- Optimum heat transfer through thin-walled reaction tube
- Compatible with all standard thermocyclers with a block format of 0.2 or 0.5 ml
- Microcentrifugation can be performed in standard microcentrifuges (poss. with adapter)
- Small sterile Biosphere® plus or PCR Performance Tested certified bag units



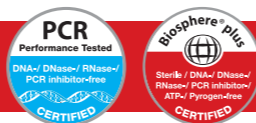
All PCR-related criteria are certified with our PCR Performance Tested quality standard – our products are guaranteed to be:

- DNA-free
- DNase/RNase-free
- Free of PCR inhibitors



The more stringent Biosphere® plus quality standard guarantees product to be:

- Sterile
- DNase/RNase-free
- DNA-free
- ATP-free
- non-pyrogenic/endotoxin-free
- Free of PCR inhibitors



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

Product	Order no.	Vol.	Sterile	Colour	Quality Grade	Pcs. per Bag	Packaging
	72.735.100	0.5 ml	Biosphere® plus sterile	transparent		100 pieces	500 pcs./inner box 1,000 pcs./case
	72.735.002	0.5 ml	----	transparent		500 pieces	2,000 pcs./case
	72.735.992	0.5 ml	----			500 pieces	3,000 pcs./case
	72.737	0.2 ml	Biosphere® plus sterile	transparent		250 pieces	1,000 pcs./inner box 2,000 pcs./case
	72.737.002	0.2 ml	----	transparent		500 pieces	2,000 pcs./case
	72.737.992	0.2 ml	----			500 pieces	3,000 pcs./case

PCR strips/Multiply®-µStripPro 0.2 ml with and without lid

Product	Order no.	Vol.	Sterile	Colour	Quality Grade	Pcs. per Bag	Packaging
	72.990	0.2 ml	Biosphere® plus sterile	transparent		50 pieces	200 strips/inner case 400 strips/case
	72.990.002	0.2 ml	----	transparent		120 pieces	480 strips/case
	72.990.992	0.2 ml	----			120 pieces	480 strips/case
	72.991.002	0.2 ml	----	transparent		120 pieces	480 strips/case
	72.991.992	0.2 ml	----			120 pieces	480 strips/case
	72.991.103	0.2 ml	----	transparent, low profile		120 pieces	1,200 strips/case
	72.985.002	0.2 ml	----	transparent		120 pieces	480 strips/case
	72.985.992	0.2 ml	----			120 pieces	480 strips/case
	72.985.092	0.2 ml	----	white		120 pieces	480 strips/case

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

Product	Order no.	Multiply®-µStrip Matching for	Sterile	Colour	Quality Grade	Pcs. per Bag	Packaging
	65.989	72.985.xxx	Biosphere® plus sterile	transparent		12 pieces	240 strips/case
	65.989.002	72.985.xxx	----	transparent		120 pieces	480 strips/case

RackSystem storage and pipetting system for 0.2 ml Multiply® PCR tubes and pre-loaded PCR plates

- Secure and fast handling of Multiply® tubes
- Flexible, two-piece system comprising work tray and support base
- Easily inserted in the thermocycler, no need to remove tubes
- Convenient 96 well microtiter format to fit any processing system
- Stackable design provides space-saving sample storage
- Support base compatible with PCR plates, e.g. 72.1978



Variable RackSystem for 0.2 ml tubes:

Sample preparation / storage in the pipetting station

A small frosted tab on the edge of the Multiply® PCR tubes facilitates removal from the work tray. The tab can also be used as additional space for marking.

Sample preparation and PCR applications

- Assembly**
The PCR work tray rests securely in the stable support base.
- Loading the PCR-Rack-System with 0.2 ml Multiply® tubes.**
Align single tubes to 45° for easy handling.
- Alternatively, load with a Multiply®-PCR plate.**
The PCR plate comprises 96 tubes in 12 strips of 8 tubes each.
- Ice-bath pipetting**
RackSystem can be used as a pipetting station.
- Sample centrifugation in completely assembled RackSystem...**
Compatible with all standard microtiter plate rotors.
- ...fast and easy placement of samples into the thermocycler.**
After amplification, reposition PCR tray onto stackable support base for space-saving storage.

Ordering Information for PCR-RackSystem

Product	Order no.	Product Description	Design	Packaging
	95.987.002	PCR work tray for 0.2 ml PCR tubes	transparent, for 96 tubes	5/bag
	95.988	Support base for PCR work tray	transparent	5/case
	95.988.001		red	
	95.988.002		blue	
	95.988.003		green	
	95.988.004	yellow		



• 10x higher fluorescence level
 • Improved sensitivity
 • Improved reproducibility

Cost-effective miniaturisation of qPCR assay in white Multiply® PCR plates

Fluorescence-based applications like qPCR, particularly those involving small volumes, benefit from the significantly improved reflection characteristics of the white wells. Samples with low DNA concentrations can also be more easily detected as a result.

Compared to transparent wells, a 10x higher fluorescence level can be measured with white wells. Thanks to maximum signal reflection, C_i values are obtained earlier (see Fig. 1). A reduction of the reagent volume (SYBR Green) per well from 25 µl to 15 µl in white plates with qPCR sealing tape is possible without significant changes to the sensitivity or stability (see Fig. 2), enabling a 40% decrease in qPCR reagent costs.

In addition, white plates minimize adverse effects like "cross-talk" that would increase well-to-well variability in transparent wells.

Increased sensitivity through maximised signal reflection

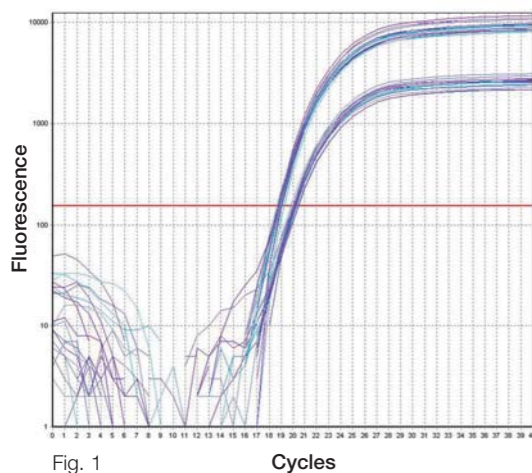


Fig. 1

C_i values for the detection of plasmid copies in white and transparent plates with reduced reaction volumes

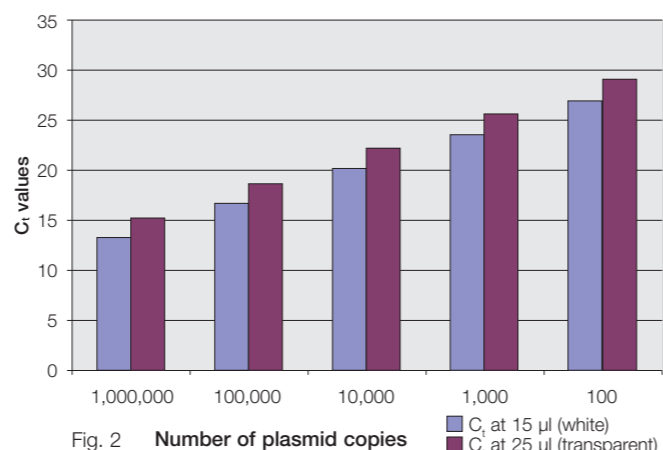


Fig. 2

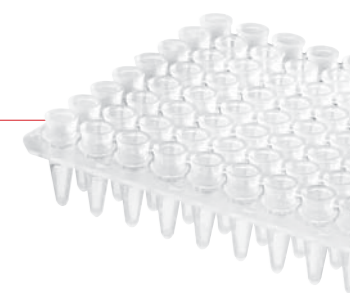
Multiply® PCR plates made of polypropylene, white & transparent

- Certified with the quality symbol "PCR Performance Tested"
- Fast and uniform thermal transfer via thin-walled reaction well
- Plates with half and full skirt available with barcode label on request
- White plates are optimised for real-time PCR
- Black alphanumerical print for easy well identification (72.985 with raised, transparent alphanumerical system)

96 Well Multiply® PCR plate, without skirt, pre-loaded with PCR strips of 8 tubes 0.2 ml

- Biosphere® plus quality, individually sterile-packaged
- Sealable with transparent strips of 8 lids (65.989.002 or 65.989)
- Polycarbonate frame/work tray
- Suitable for use in the RackSystem (see page 25)
- Free of DNA, DNase/RNase, PCR-inhibitors and ATP; non-pyrogenic /endotoxin-free

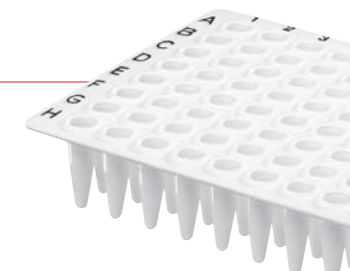
Order no.	Colour	Skirt	Deck	Profile	Well	Max. volume	Quality Grade	Packaging
72.985	Transparent	Without skirt	Flat deck	High profile	96	0.3 ml		1 pcs./bag, 20 pcs./case



96 Well Multiply® PCR plate, without skirt

- **NEW:** Easy to cut
- Raised well rims, optimised for heat-sealing tapes
- Fits most commonly used thermocyclers
- Can be sealed with qPCR tape (95.1999, 95.1994) or transparent strips of 8 lids (65.1998.400)
- Free from DNA, DNase/RNase and PCR inhibitors

Order no.	Colour	Skirt	Deck	Profile	Well	Max. volume	Quality Grade	Packaging
72.1978.202	Transparent	Without skirt	Flat deck	High profile	96	0.3 ml		25 pcs./inner case, 100 pcs./case
72.1978.232	White	Without skirt	Flat deck	High profile	96	0.3 ml		50 pcs./inner case, 200 pcs./case



96 Well Multiply® PCR plate with half skirt, flat deck

- Recommended for Applied Biosystems (ABI) thermocyclers and DNA sequencers
- Flat deck enables reliable and secure tape sealing
- Raised well rims, optimised for heat-sealing tapes
- Can be sealed with qPCR tape (95.1999, 95.1994) or transparent strips of 8 lids (65.1998.400)
- Free from DNA, DNase/RNase and PCR inhibitors

Order no.	Colour	Skirt	Deck	Profile	Well	Max. volume	Quality Grade	Packaging
72.1979.102	Transparent	Half skirt	Flat deck	High profile	96	0.3 ml		25 pcs./inner box, 100 pcs./case
72.1979.132	White	Half skirt	Flat deck	High profile	96	0.3 ml		25 pcs./inner box, 100 pcs./case





96 Well Multiply® PCR plate with half skirt and raised edges, 0.3 ml

- Recommended for Applied Biosystems (ABI) thermocyclers and DNA sequencers
- Can be sealed with transparent strips of 8 lids (65.1998.400) or adhesive tapes (95.1999, 95.1995, 95.1994 and 95.1993)
- Also available with barcode label (72.1979.203)
- Free from DNA, DNase/RNase and PCR inhibitors



Order no.	Colour	Skirt	Deck	Profile	Well	Max. volume	Quality Grade	Packaging
72.1979.202	Transparent	Half skirt	Raised lid edges	High profile	96	0.3 ml		25 pcs./bag, 100 pcs./case
72.1979.203	Transparent	Half skirt with barcode label	Raised lid edges	High profile	96	0.3 ml		25 pcs./bag, 100 pcs./case

96-well Multiply® PCR plate with full skirt, low profile well design

- Low profile design minimises dead volume and cycle time
- Enhanced stability for automated systems
- Raised well rims, optimised for heat-sealing tapes
- Can be sealed with qPCR tape (95.1999, 95.1994) or transparent strips of 8 lids (65.1998.400)
- Free from DNA, DNase/RNase and PCR inhibitors



Order no.	Colour	Skirt	Deck	Profile	Well	Max. volume	Quality Grade	Packaging
72.1980.202	Transparent	Full skirt	Flat deck	Low profile	96	0.2 ml		50 pcs./inner case, 200 pcs./case
72.1980.232	White	Full skirt	Flat deck	Low profile	96	0.2 ml		50 pcs./inner case, 200 pcs./case

96-well Multiply® PCR plate with half skirt, low profile well design

- Low profile design minimises dead volume and cycle time
- Enhanced stability for automated systems
- ABI style
- Free from DNA, DNase/RNase and PCR inhibitors
- Can be sealed with transparent strips of 8 lids (65.1998.400) or adhesive tapes (95.1999, 95.1995, 95.1994 and 95.1993)



Order no.	Colour	Skirt	Deck	Profile	Well	Max. volume	Quality Grade	Packaging
72.1981.202	Transparent	Half skirt	Raised lid edges	Low profile	96	0.2 ml		25 pcs./bag, 100 pcs./case
72.1981.232	White	Half skirt	Raised lid edges	Low profile	96	0.2 ml		25 pcs./bag, 100 pcs./case



Lightcycler 480 PCR plate with 96 wells and half skirt

- Raised well rims, optimised for heat-sealing tapes
- Can be sealed with qPCR tape (95.1999, 95.1994) or transparent strips of 8 lids (65.1998.400)
- Free from DNA, DNase/RNase and PCR inhibitors
- Low profile design minimises dead volume and cycle time



Order no.	Colour	Skirt	Deck	Profile	Well	Max. volume	Quality Grade	Packaging
72.1982.202	White	Half skirt	Flat deck	Low profile	96	0.2 ml		25 pcs./inner case, 100 pcs./case

384 Well Multiply® PCR plate with skirt

- 40 µl maximum volume per well
- 8 apertures in the frame facilitate positioning and removal of the plate from the heating block
- Sealable with adhesive tape (95.1999, 95.1995, 95.1994 and 95.1993)
- Suitable for many automatic platform systems
- Free from DNA, DNase/RNase and PCR inhibitors



Order no.	Colour	Skirt	Deck	Well	Max. volume	Quality Grade	Packaging
72.1984.202	Transparent	Full skirt	Flat deck	384	40 µl		50 pcs./bag, 50 pcs./case

Lightcycler 480 PCR plate with 384 wells and skirt

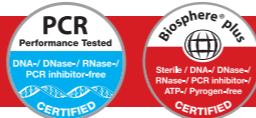
- Raised well rims, optimized for heat-sealing tapes
- Sealable with qPCR tape (95.1999, 95.1994)
- Free from DNA, DNase/RNase and PCR inhibitors



Order no.	Colour	Skirt	Deck	Well	Max. volume	Quality Grade	Packaging
72.1985.202	White	Full skirt	Flat deck	384	40 µl		50 pcs./bag, 100 pcs./case

Optical lid strip for 96-well plates

Product	Order no.	Designation	Quality Grade	Colour	Packaging
	65.1998.400	Strip of 8 lids, flat for 96-well plates, highly transparent		Transparent	300 pcs./bag, 1,200 pcs./case



No. of wells	96 pre-assembled	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®

FlexCycler ² 96 Well		●				
qTOWER 2.0/2.2 SP	●	●		●		
SpeedCycler ² 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		●		●		

Legend: ● = recommended = not checked

* with compatible adapter from ABI

The compatibility table represents a guide for recommended usage of the products listed. We would like to emphasise that we do not routinely check the products for their compatibility to the equipment listed. As a result, these do not represent guaranteed product characteristics.



No. of wells	96 pre-assembled	96	96	96	96	384 full skirt	96 wells	384 wells
Half/full skirt	Without	Without	Half	Full	Half	Full	Full	Full
Profile	High	High	High	Low	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®

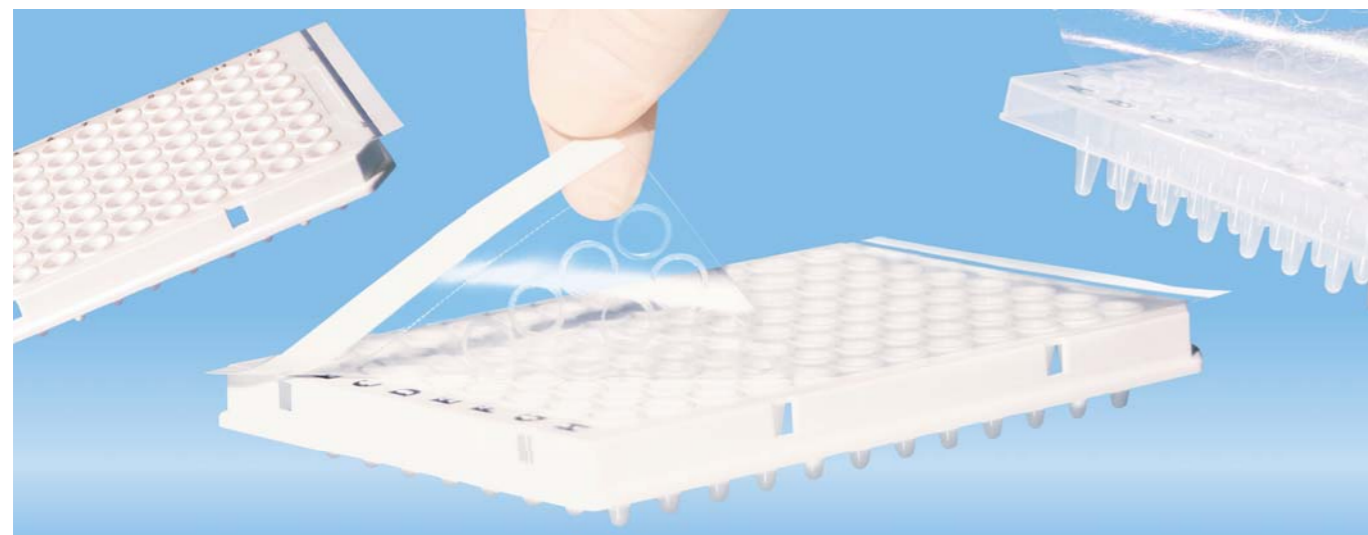
Lightcycler® 96 System							●	
Lightcycler® 480 System							●	●

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		●	●	●			●	
Quanta		●	●	●				
TC412/TC512		●	●	●			●	
Touchgene / Touchgene Gradient		●	●	●	●			



Adhesive sealing tapes

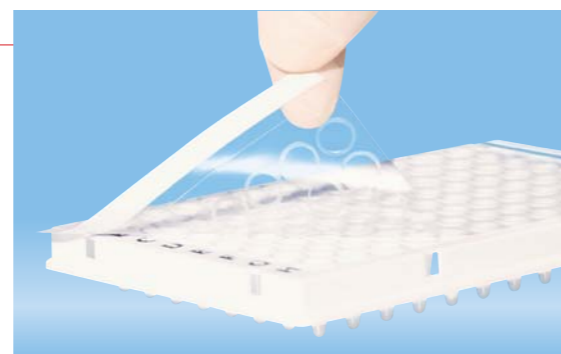
Tailor-made tape materials are required for the hermetic sealing of polypropylene, polystyrene and polycarbonate micro test plates in order to prevent evaporation and protect the samples during the application, as well as for sample storage and shipping.

A variety of Sarstedt films are available that have been specially developed for the stringent requirements encountered in PCR, the storage of active ingredients, and high throughput screening. All tapes are produced under cleanroom conditions to prevent contamination with DNase/RNase and nucleic acids.

Highly transparent adhesive tape for quantitative PCR • 95.1999

The 50 µm tape is coated with a smear-free, crystal clear adhesive that shows minimal adhesion at room temperature and is, therefore, exceptionally easy to handle. The strong adhesive effect is brought during PCR as a result of the heat produced minimising loss by evaporation.

- Highly transparent tape ideally suited for real-time PCR and other fluorescence-based applications
- Secure and reliable sealing thanks to the innovative adhesive
- Avoidance of cross-contamination
- Does not stick to skin or gloves during application
- Compatible with aqueous solutions and organic solvents such as DMSO, acetonitrile and methanol
- Functional sealing temperature range -40°C to 110°C



Transparent adhesive tape for end point PCR and qPCR • 95.1994

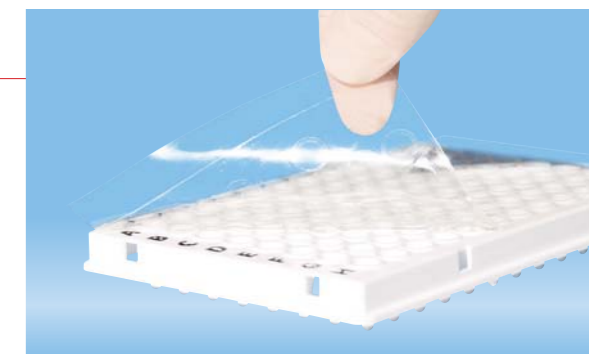
- Optically transparent foil for standard and real-time PCR
- Ideally suited for storing sample material/compounds at temperatures as low as -70°C
- Compatible with aqueous solutions and organic solvents such as DMSO, acetonitrile and methanol
- Functional sealing temperature range for PCR: up to 110°C



Transparent adhesive tape for end point PCR and sample storage, strongly adhesive • 95.1993

The tape is made of a 50 µm thin polyester film, which is coated with a very strong adhesive.

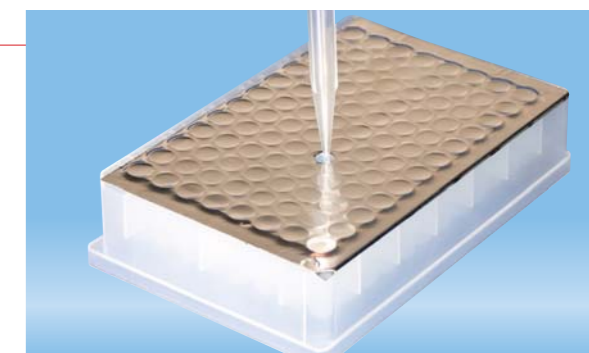
- High protection against evaporation thanks to the particularly strong adhesive bond
- Compatible with aqueous solutions and organic solvents
- Functional sealing temperature range -20°C to 110°C



Adhesive aluminium foil for PCR and sample storage • 95.1995

The heat-resistant, robust, pierceable 38 µm aluminium foil stands out with efficient anti-evaporation protection and resistance to solvents. Perforated end tabs can be easily removed after attaching the tape.

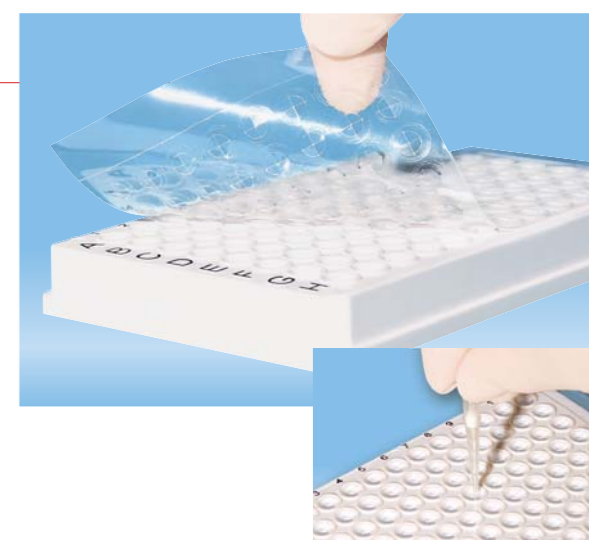
- Aluminium tape can be pierced, e.g. with pipette tips
- Ideally suited for storing sample material/active ingredients at temperatures as low as -70°C
- Compatible with aqueous solutions and organic solvents such as DMSO, acetonitrile and methanol
- Functional sealing temperature range for PCR: up to 110°C



Pierceable adhesive tape for DNA sequencers, HPLC and autosamplers • 95.1992

The 50 µm thin tape is coated with a strong adhesive and suitable for easy piercing. The openings are free from adhesive to prevent samples, needles or pipette tips from sticking to the tape.

- Easy sampling with tips or pipetting systems, as the clear tape is free of adhesive above each well
- Temporary protection against evaporation
- Compatible with aqueous solutions and organic solvents
- Cost-effective tape for use in DNA sequencers, HPLC and autosamplers
- Functional sealing temperature range -20°C to 110°C



Ordering Information

Order no.	Product description	Application	Special properties	Pierce-able	Functional temperature range	Packaging
95.1992	Easy to pierce sealing tape	Processing/DNA-sequencer, HPLC, autosampling	Easy to pierce, 96 perforated openings without adhesive	yes	-20°C to 110°C	100 tapes/inner case
95.1993	Transparent PCR tape, strongly adhesive	PCR, sample storage	Very strongly adhesive bond, eliminates edge effects/fringing, resealable	no	-20°C to 110°C	100 tapes/inner case
95.1994	Transparent PCR and qPCR tape	PCR, real-time PCR	Good optical transparency, high chemical resistance	no	-70°C to 110°C	100 tapes/inner case
95.1995	Adhesive aluminium tape	Sample storage, PCR	Pierceable, light protection for samples, high chemical resistance	yes	-70°C to 110°C	100 tapes/inner case
95.1999	Adhesive, optically highly transparent qPCR tape	Real-time PCR, Fluorescence analyses	Highly transparent, heat-sensitive adhesive, minimal evaporation rates	no	-40°C to 110°C	100 tapes/inner case



As the trend towards decreasing sample volumes continues it becomes increasingly important to minimise potential interactions between the analytes and the micro tubes. In response to this demand, our new low binding micro tubes are specially designed to meet the requirements of protein/DNA analytics while maximising protein and DNA recovery rates.

Aside from low sample volumes, minimising protein and DNA loss is essential for low protein/DNA concentrations to enable further analysis.

- Minimal protein/DNA binding = maximum recovery rate = minimal losses of protein/DNA
- DNA low binding tubes are suitable for centrifugation up to 30,000 x g* (2 ml to 25,000 x g*)
- Protein low binding tubes are suitable for centrifugation up to 20,000 x g*

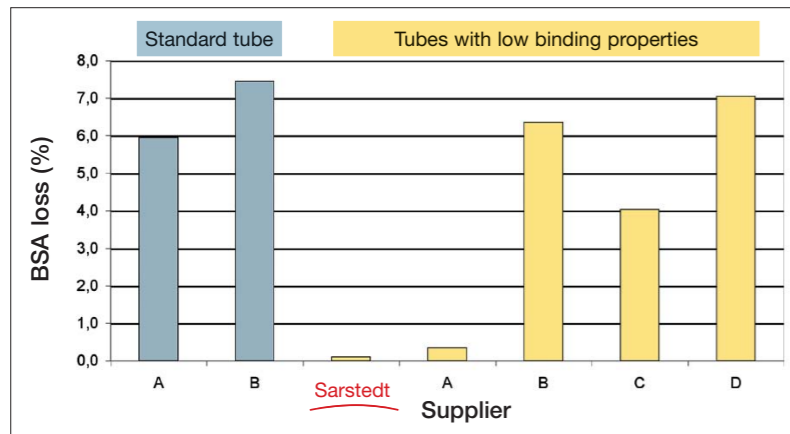
* Filled with nominal volume of DI water (low surface tension), at 20°C for 90 min. in fixed-angle rotor



In PCR Performance Tested quality:

- ✓ Free of DNA
- ✓ Free of DNase/RNase
- ✓ Free of PCR inhibitors

Protein low binding – Comparative representation of mean BSA loss:

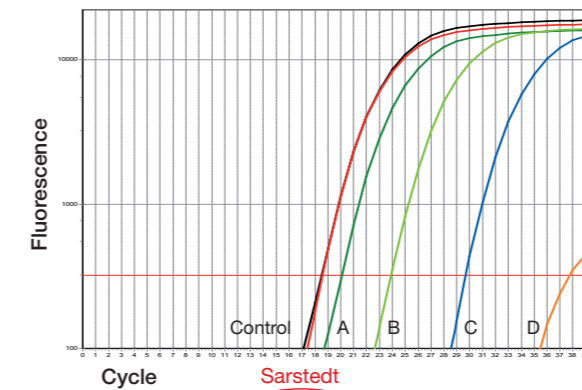


Test performance:

10 test tubes each from various suppliers were filled with an aqueous solution of BSA in a concentration of 10 µg/ml in water and stored at 4°C. After incubation for 24h the BSA solution was removed, and the concentration was determined via a Bradford Assay (Zor, T. and Selinger, Z. 1996, Anal. Biochem. 236, p. 302-308).

The percentage loss calculation was based on the average value established for the 10 tested tubes.

DNA low binding – Comparative representation of DNA loss:



Test procedure:

10 test tubes each from various suppliers were filled with 100 µl of a plasmid-DNA solution (concentration: 10⁵/µl) and shaken at 37°C. After the incubation time of 3h the DNA content was determined via real-time PCR.

One of the 10 test series is shown as an example in this diagram.

- Control
- Sarstedt
- Supplier A
- Supplier B
- Supplier C
- Supplier D

Ordering Information

Volume	Order no.	Description	Quality Grade	Packaging
0.5 ml	72.704.600	Protein Low Binding	PCR Performance Tested	50 pcs./bag 300 pcs./inner box 1,200 pcs./case
	72.704.700	DNA Low Binding		
1.5 ml	72.706.600	Protein Low Binding	PCR Performance Tested	50 pcs./bag 200 pcs./inner box 800 pcs./case
	72.706.700	DNA Low Binding		
2.0 ml	72.695.600*	Protein Low Binding	PCR Performance Tested	50 pcs./bag 200 pcs./inner box 800 pcs./case
	72.695.700	DNA Low Binding		

* Available on request

SafeSeal micro tubes

The requirements placed on micro tubes are varied: They need to be able to withstand mechanical and thermal loads, any interactions with analytes should be minimised, and biological purity may be required. Alongside standard micro tubes and low binding tubes, we also offer SafeSeal variants for use under thermal loads. Our quality standards PCR Performance Tested and Biosphere® plus offer certified purity.

- Retaining cams ensure a secure fit even under thermal load
- Wide hinge for simple and precise closure
- Large writing space on lid
- Centrifugation up to 30,000 x g (2.0 ml micro tubes: to 25,000 x g)*
- 3 purity standards for sophisticated requirements

*Filled with nominal volume of DI water (low surface tension), at 20°C for 90 min. in fixed-angle rotor

Ordering Information

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

* Available on request



MegaBlock® 96 Well

The MegaBlock® 96 Well is ideal for automated processing of sample volumes up to 2.2 ml or handling large quantities of archive samples.

- Alphanumerical labelling of the wells
- Each well 100% leakproof tested
- Free of human DNA and DNase/RNase, non-pyrogenic/endotoxin-free
- Ideal for long-term sample storage
- Also suitable for heat sealing systems
- Tapes and mats are available for covering
- Raised wells on the 0.5 and 1.2 ml options

MegaBlock® 0.5/1.2/2.2 ml, PP

- For backup storage of pharmaceutical samples
- For DNA isolation, enzyme assays and tissue culture applications
- Resistant to solvents, even to DMSO
- Autoclavable*

MegaBlock® 1.2 ml, PS transparent

- Ideal for long-term storage of blood samples
- Made of highly transparent, crystal-clear polystyrene; enables easy visual checking of the wells

MegaBlock®

Order no.	Design	Volume/material	Packaging
82.1969.002	round, raised wells	0.5 ml PP	56 pcs./case
82.1970.002	round, raised wells	1.2 ml PS transparent	32 pcs./case
82.1971.002	round, raised wells	1.2 ml PP	32 pcs./case
82.1972.002	square wells, round bottom	2.2 ml PP	32 pcs./case

Lids and tapes for MegaBlock®

Order no.	Design	Packaging
95.1990.002	Cover for MegaBlock®, pierceable, suitable for round wells	10 pcs./bag; 50 pcs./inner box; 250 pcs./case
95.1991.002	Cover for 2.2 ml MegaBlock®, suitable for 82.1972.002	10 pcs./bag; 50 pcs./inner box; 250 pcs./case
82.1586	Acetate tape, transparent	100 tapes/inner box

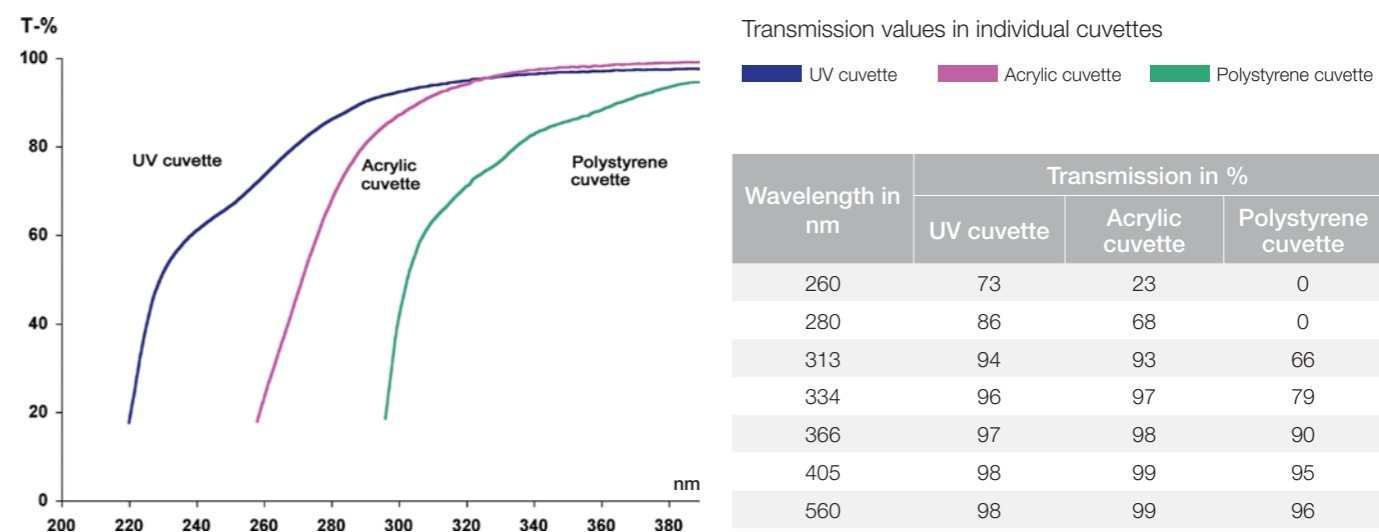
*Products made of PP can be autoclaved at temperatures up to 121°C without significant losses in terms of mechanical properties. It is the responsibility of the user to check whether other product properties are influenced in terms of the desired application.

The plastic material of the UV cuvette enables measurements in the UV range from a wavelength of 220 nm. Contamination that can occur on quartz cuvettes as a result of rinsing processes are avoided by using the new UV-transparent disposable cuvette. In addition to non-certified UV cuvettes, our range includes certified options individually sealed with a cap and packaged in Styrofoam boxes to protect from scratches.

Typical areas of application and product features

- Photometric quantification of nucleic acids at 260 nm and proteins at 280 nm
- Minimal UV absorption for DNA, RNA and protein quantification
- 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.
- Minimises absorbance deviations due to consistently accurate optical quality
- Economical alternative to quartz cuvettes
- Optionally we can also supply individual UV cuvettes sealed with lids (certified DNA/RNase/protein-free), which can be used both for safe sample storage and to avoid contamination

For measurements in the short-wave UV range below 300 nm, the material-related self-absorptive characteristics of PS and acrylic (PMMA) cuvettes increase distinctively as their transmission ration decreases.



Technical Specifications

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



Ordering information for UV-micro cuvette

Order no.	Height in mm	LCH	Optical sides	Packaging
67.758	45	8.5 mm	2	100 pcs. in Styrofoam box; 400 pcs./case
67.758.001	45	8.5 mm	2	100 pcs. in Styrofoam box (individually sealed with lid) 400 pcs./case, certified DNA/RNase/Protein-free
67.759	45	15 mm	2	100 pcs. in Styrofoam box; 400 pcs./case
67.759.001	45	15 mm	2	100 pcs. in Styrofoam box (individually sealed with lid) 400 pcs./case, certified DNA/RNase/Protein-free

*If you have any questions:
We are happy to help!*