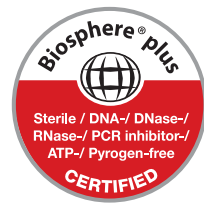


# Micro tubes

The versatile solution



**SARSTEDT**

It is impossible to imagine a laboratory routine these days without the small, tapered plastic tubes with a snap lid - the micro tubes. Quick to open and leak-tight when closed, they are used in a myriad of applications. They are essential components of scientific investigations and diagnostic tests or in the storage and filling of reagents. They are as resistant to heat and subzero temperatures as they are to chemicals and mechanical stress.

With over 60 years of experience in plastics technology, SARSTEDT has developed and perfected the ideal micro tubes for use in a volume range from 0.5 to 5 milliliters. Precise, robust and made from premium polypropylene, they are the optimal laboratory companions.

We present a brief introduction to our range of micro tubes and related lab accessories on the following pages in order to help you easily choose the right tubes.

*Your SARSTEDT team*



Cleanroom conditions, skilled personnel wearing protective clothing, and automated production processes are the prerequisites for the certified SARSTEDT "PCR Performance Tested" and "Biosphere® plus" quality standards.

Since 1995, we have provided our customers with product purity certifications tailored to their applications to ensure maximum reproducibility in their analyses. Our certification standards are continuously adjusted so that we can offer users the required level of purity for their routine work at all times.



**PCR Performance Tested quality • The SARSTEDT quality and purity standard**

PCR Performance Tested certification is specially tailored to the demands and requirements of work with nucleic acids (e.g. qPCR, PCR, purification and storage). This quality grade allows customers to use SARSTEDT consumables with confidence, directly in nucleic acid analysis.

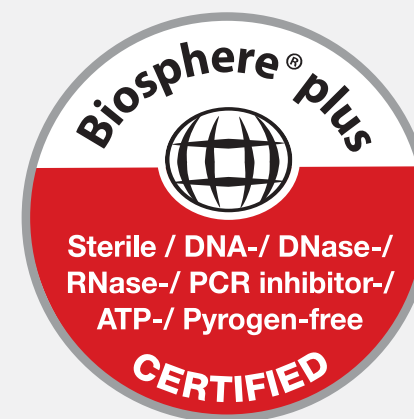
PCR Performance Tested products meet the following purity criteria, which are certified by an independent laboratory:

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

We guarantee compliance with the following limits:

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

Technical modifications reserved



**Biosphere® plus quality • An extra degree of certainty**

Scientific analysis methods have been continuously refined to the point where even individual molecules can be identified. With increased sensitivity, consumables must meet significantly more exacting requirements, so that users can be certain that even the smallest contamination will be reliably excluded.

The Biosphere® plus quality achieves a purity standard that gives users the utmost protection against any possible contamination.

In addition to our high-purity production conditions, all Biosphere® plus certified products undergo a validated decontamination process. The limits are thus significantly lower than those of the PCR Performance Tested quality. Biosphere® plus items are also free from ATP and endotoxins, non-pyrogenic and are sterile in accordance with ISO 11135.

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

- ✓ Sterile
- ✓ DNA-free
- ✓ DNase/RNase-free
- ✓ PCR inhibitor-free
- ✓ ATP-free
- ✓ Pyrogen-free/endotoxin-free

We guarantee compliance with the following limits:

Human DNA <5.0 fg/µl · Bacterial DNA <0.2 fg/µl · DNase <5x10<sup>-7</sup> U/µl  
RNase <5x10<sup>-11</sup> Kunitz units/µl · ATP <1x10<sup>-12</sup> mmol/µl · pyrogens <0.002 EU/ml  
Sterility validated according to ISO 11135

Technical modifications reserved

### Wide lid connection – easy closing

The specially developed reinforced, extra-wide lid hinge makes it easier to close the micro tubes. The lid can be guided precisely and securely closed even using just one hand.



### Durable label fields – secure labeling

Slightly rough, frosted fields on the lid allow for long-lasting labeling of the samples. All micro tubes with volumes of 1.5, 2.0, and 5.0 ml also have frosted spaces on the side for additional labeling.



### Clear graduation – quick volume estimations

Easy estimation of the sample volume means additional certainty. Clear, frosted graduations on the 1.5, 2.0, and 5.0 ml micro tubes make it easy to estimate the fill level of the sample, even with dark or cloudy liquids.



### Colored options – individual coding

Micro tubes in different colors make it easier to reliably identify samples or stored reagents. Color coding reduces the risk of confusing samples and increases efficiency in the lab.



As an important material in day-to-day lab work, micro tubes have to meet the highest demands of the users. SARSTEDT micro tubes feature the following outstanding characteristics:

- Easy handling – the optimized design makes it easier to open and close the tubes and facilitates efficient handling in any application
- Chemical-resistant – the processed materials are resistant to a wide range of the most commonly used solvents, acids and bases
- Temperature-resistant – polypropylene micro tubes can be autoclaved at 121 °C and withstand temperatures as low as -80 °C
- Transparent – highly polished tools and premium raw materials guarantee that you will always be able to see your sample inside the tube
- Durable – the optimal combination of design and materials enables the micro tubes to be centrifuged up to 20,000 x g, and some variants can even be centrifuged up to 30,000 x g (tested at 20 °C for 20 minutes in a fixed-angle rotor, filled to nominal capacity)

SARSTEDT micro tubes are suitable for various purposes, and are as diverse as the applications for which they are designed:

- 0.5 ml, 1.5 ml, 2.0 ml or the intermediate 5 ml – four tube volumes that are tailor-made for any application
- Biosphere® plus, PCR Performance Tested or standard quality – three purity grades for every requirement
- SafeSeal, standard or easy-fit caps – three designs for secure handling
- Low binding, colored or transparent – three material variants for protein or DNA analytics, light-sensitive applications or automated processing





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 reaction 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 distort the analyses is not necessary.

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

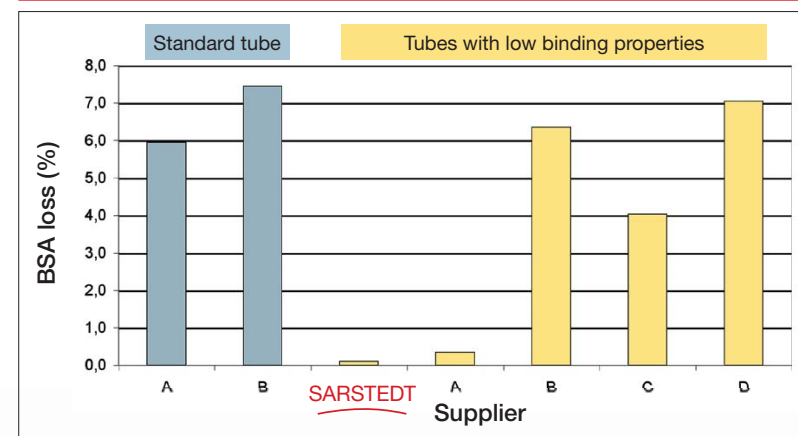
- Available in four volumes – 0.5 ml, 1.5 ml, 2.0 ml, and 5.0 ml
- Sturdy polypropylene – Low protein binding tubes can be centrifuged up to 20,000 x g\*, low DNA binding tubes can be centrifuged up to 30,000 x g\* (2 ml up to 25,000 x g\*)
- Certified PCR Performance Tested quality – DNA-free, DNase/RNase-free and free from PCR inhibitors
- Small, practical pack sizes – 50 tubes in a re-sealable 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.

## Low protein binding – minimal protein loss

Low protein binding micro tubes are particularly suitable for the analysis of antibodies, enzymes and other valuable substances both in the field of proteomics and in many other routine applications. The low protein-binding to the vessel wall ensures maximum recovery, improved analysis and clearer results.

## Low protein binding – Comparative representation of mean BSA loss:



Test procedure:

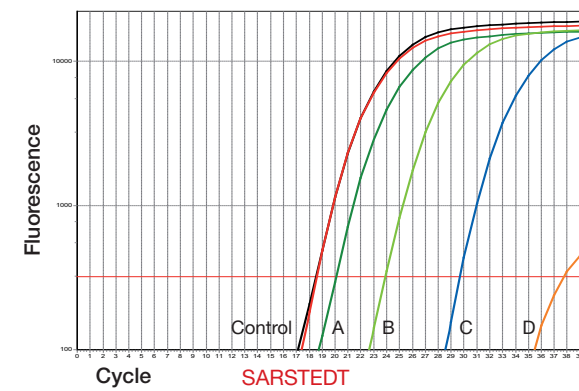
10 test tubes each from various suppliers were filled with an aqueous solution of BSA in a concentration of 10 µg/ml in water and stored at 4 °C. After incubation for 24h, the BSA solution was removed and the concentration determined using a Bradford Assay (Zor, T. and Selinger, Z. 1996, Anal. Biochem.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

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

## Low DNA binding – minimal DNA loss

DNA Low Binding micro tubes are suitable for all applications involving DNA. For example, they can be used for the analysis of plasmids, oligonucleotides or cell extracts. They allow for maximum DNA recovery even with the smallest volumes.

## Low DNA 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: 10<sup>5</sup>/µl) and shaken at 37 °C. After the incubation time of 3 hours, 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 – Low binding micro tubes

Order no.	Low Binding	Volume	Packaging: bag / inner box / case
72.704.600	Protein	0.5 ml	50/300/1,200
72.704.700	DNA	0.5 ml	50/300/1,200
72.706.600	Protein	1.5 ml	50/200/800
72.706.700	DNA	1.5 ml	50/200/800
72.695.600	Protein	2.0 ml	50/200/800
72.695.700	DNA	2.0 ml	50/200/800



SafeSeal micro tubes are especially suitable for use under thermal or mechanical stress. The lid design, with a molded retaining cam allows for reliable sealing even at high centrifugation forces, or when mixing or heating samples. The SafeSeal micro tubes offer additional security when handling especially sensitive reagents, detergents such as SDS or volatile substances.

- Special lid design – secure sealing even under thermal and mechanical stress
- Extremely durable – 2.0 ml reaction tubes withstand up to 25,000 x g\* while 0.5 and 1.5 ml reaction tubes can even be centrifuged up to 30,000 x g\* without the lids opening unexpectedly
- Certified quality – three purity grades to meet all requirements

## Ordering information – 0.5 ml SafeSeal micro tubes

Order no.	Purity grade	Color	Packaging: bag / inner box / case
72.704.200		transparent	50/250/500
72.704.400		transparent	250/500/2,000
72.704		transparent	500/500/2,000
72.704.001		brown	500/500/2,000
72.704.002		red	500/500/2,000
72.704.004		yellow	500/500/2,000
72.704.005		green	500/500/2,000
72.704.006		blue	500/500/2,000

## Ordering information – 1.5 ml SafeSeal micro tubes

Order no.	Purity grade	Color	Packaging: bag / inner box / case
72.706.200		transparent	50/250/500
72.706.400		transparent	250/1,000/2,000
72.706		transparent	250/1,000/2,000
72.706.001		brown	250/1,000/2,000
72.706.002		red	250/1,000/2,000
72.706.004		yellow	250/1,000/2,000
72.706.005		green	250/1,000/2,000
72.706.006		blue	250/1,000/2,000

## Ordering information – 2.0 ml SafeSeal micro tubes

Order no.	Purity grade	Color	Packaging: bag / inner box / case
72.695.200		transparent	50/250/500
72.695.400		transparent	250/1,000/2,000
72.695.500		transparent	250/1,000/2,000
72.695.001		brown	250/1,000/2,000
72.695.002		red	250/1,000/2,000
72.695.004		yellow	250/1,000/2,000
72.695.005		green	250/1,000/2,000
72.695.006		blue	250/1,000/2,000
72.695.007		purple	250/1,000/2,000

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

## Individually blister-packed SafeSeal micro tubes

Highly sensitive applications such as those in the fields of analytics, diagnostics and development call for the highest degree of purity for all consumables used. Individually blister-packed "Biosphere® plus" SafeSeal micro tubes are the ideal choice for such high demands. The small packages make it easier to quickly remove the tubes from the case and allows for space-saving storage.

## Ordering information – SafeSeal micro tubes

Volume	Order no.	Purity grade	Color	Packaging: bag / inner box / case
0.5 ml	72.704.201*		transparent	1/50/100
1.5 ml	72.706.201		transparent	1/60/120
2.0 ml	72.695.201		transparent	1/60/120

\*Available on request

## 5 ml micro tubes – reliable handling of filling volumes between 2 and 5 ml

Routine applications in the lab such as dilution series, cell disruption or sample backup frequently require filling volumes above 2 ml. Due to their slender design or screw caps, tubes with a larger volume are sometimes not ideally suited for these purposes. The 5 ml SARSTEDT micro tube combines the advantages of the SafeSeal micro tube and a 5 ml screw-cap tube in a single product. Easy to open with just one hand thanks to the ergonomic design, the snap-on lids with lip seal and retaining cams provide secure sealing characteristics even under thermal strain. The wide hinge enables easy and precise closure, eliminating the risk of mixing up separate screw caps. Certified DNA-, DNase-, RNase- and PCR inhibitor-free, the 5 ml micro tubes in PCR Performance Tested quality provide particular reliability in nucleic acid analytics and molecular biology.

Advantages of the 5 ml micro tube at a glance:

- Robust polypropylene – centrifugation to 20,000 x g, autoclavable
- Low height – minimizes contamination risk from pipette cone contact
- Compact size – space-saving backup storage of samples, media or cultures

## Ordering information – 5 ml micro tubes

Order no.	Purity grade	Description	Packaging
72.701		5 ml micro tubes	100 / bag 800 / case
72.701.400		5 ml micro tubes, PCR Performance Tested	100 / bag 800 / case
95.1298		5 ml micro tubes, centrifuge adapter	8 / bag 96 / case





SARSTEDT micro tubes in standard quality are the ideal day-to-day companions in any lab. Made of durable polypropylene and easy to handle, they are ideal for any routine application

- Durable standard quality – all micro tubes can be safely centrifuged at 20,000 x g\*
- Sophisticated design – easy to open, securely sealed when closed
- Larger packaging units – economical storage and backup

## Ordering information – 0.5 ml micro tubes

Order no.	Color	Packaging: bag/case
72.699	transparent	1,000 / 5,000
72.699.001	red	500 / 5,000
72.699.002	yellow	500 / 5,000
72.699.004	green	500 / 5,000
72.699.003	blue	500 / 5,000
72.699.005	purple	500 / 5,000

## Ordering information – 1.5 ml micro tubes

Order no.	Color	Packaging: bag/case
72.690.301	transparent	500 / 5,000
72.690.304	brown	500 / 5,000
72.690.377	red	500 / 5,000
72.690.378	yellow	500 / 5,000
72.690.376	green	500 / 5,000
72.690.375	blue	500 / 5,000
72.690.307	purple	500 / 5,000

## Ordering information – 2.0 ml micro tubes

Order no.	Color	Packaging: bag/case
72.691	transparent	500 / 5,000
72.691.001	brown	500 / 5,000
72.691.002	red	500 / 5,000
72.691.004	yellow	500 / 5,000
72.691.005	green	500 / 5,000
72.691.006	blue	500 / 5,000
72.691.007	purple	500 / 5,000

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

## 0.5 ml micro tubes with ventilation aperture

Micro tubes with small apertures in the lid allow for ventilation and pressure balance between the tube and its environment, without having to open the lid. This prevents the lid from popping open even at high gas pressures or excessive heating, and makes it easier to open when there is low pressure in the tube.

## Ordering information – Micro tubes with ventilation aperture

Volume	Order no.	Cap	Packaging: bag/case
0.5 ml	72.698	PP, with ventilation aperture	1,000 / 5,000

## 1.5 ml EASY CAP micro tubes

EASY CAP micro tubes were specially developed for routine applications where an easy-fit cap and large perceable lid membrane are particularly important. The snap-lid can be perforated, for example in order to extract a sample from the tube. The clear polypropylene allows for automated fill-level control and easy sample inspection. The large labeling surface on the lid simplifies labeling.

## Ordering information – EASY CAP micro tubes

Volume	Order no.	Cap	Packaging: bag/case
1.5 ml	72.690.550	PP, "EASY CAP"	500 / 5,000

## Micro tubes with loop soft caps

Easy-fit loop soft caps are suitable for applications where the micro tubes are frequently opened and closed. As little force is required to open and close the tubes, there is less stress on the fingers and hands. The color coding allows for samples to be differentiated more quickly.

## Ordering information – PP micro tubes with attached, soft LDPE cap

Order no.		Cap color	Packaging: bag/case
1.5 ml	2.0 ml		
72.688	72.689	transparent	500 / 5,000
72.688.001	72.689.001	blue	500 / 5,000
72.688.002	72.689.002	green	500 / 5,000
72.688.003	72.689.003	red	500 / 5,000
72.688.004	72.689.004	yellow	500 / 5,000
72.688.005	72.689.006	purple	500 / 5,000

## Micro tubes without caps

For special applications such as purification or aliquoting, micro tubes without attached caps are a practical solution. With no text space or graduations, the sample can be seen easily, and there is space for labels. Separate push-caps are available to close them.

### Ordering information – micro tubes without caps

Volume	Order no.	Skirted base	Packaging: bag/case
0.5 ml	72.698.200	no	500 / 5,000
1.5 ml	72.696	no	500 / 10,000
2.0 ml	72.708	no	500 / 5,000
2.0 ml	72.709	yes	500 / 5,000



## Separate caps for 1.5 ml and 2.0 ml micro tubes

Separate LDPE caps are especially suitable for automated closing or storage of samples in micro tubes without attached caps. The flat caps allow for space-saving storage, while the raised edge of the tall caps makes it easier to open and close the tubes. The soft caps with a moveable retaining loop for attachment are a flexible alternative when it is crucial not to mix up the lids.

### Ordering information – LDPE caps

Cap type	Order no.	Packaging: bag/case
Flat push-cap	65.697	1,000 / 10,000
Tall push-cap	65.723	1,000 / 10,000
Soft cap with retaining loop	65.109	1,000 / 10,000



## Felt marker

Waterproof felt markers in four different colors allow for clear and reliable labeling of micro tubes and other consumables and containers in the lab. The alcohol-resistant felt marker is especially suitable for applications where alcohols, e.g. for disinfection or sample processing, are used.

### Ordering information – felt marker

Order no.	Color	Property	Packaging
95.953	blue	permanent, waterproof	10 / box
95.954	black	permanent, waterproof	10 / box
95.955	green	permanent, waterproof	10 / box
95.956	red	permanent, waterproof	10 / box
95.950	black	permanent, alcohol-resistant	10 / box



## Polycarbonate racks

The rack system, made of crystal-clear, shatter-proof and durable polycarbonate, offers space for up to 48 tubes. Available in three different formats, they are ideal for processing and storing all micro tubes. They can be disassembled, cleaned and easily autoclaved in just a few simple steps.

### Ordering information – polycarbonate racks

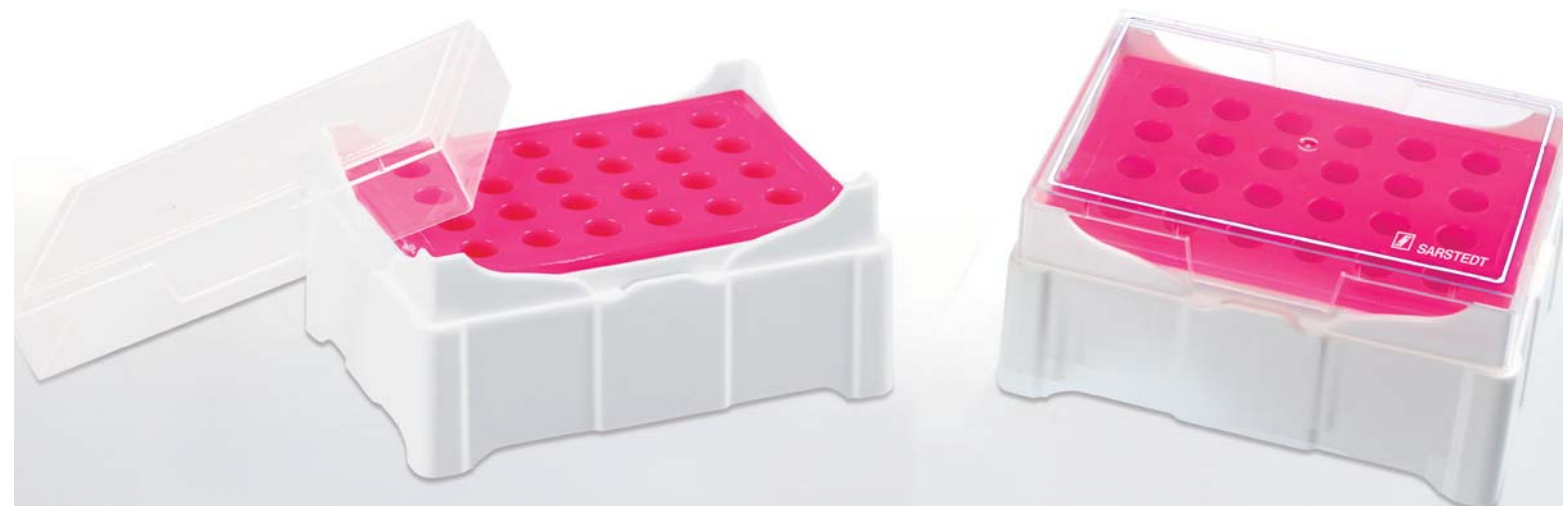
Order no.	for micro tubes	Capacity/format	Length	Width	Height
93.870	2.0 ml	18/3 x 6	137	70	40
93.826	1.5 ml	18/3 x 6	137	70	40
93.849.100	1.5 ml and 2.0 ml	20/2 x 10	257	62	40
93.48.011	0.5 ml	48/4 x 12	257	90	40
93.837	1.5 ml	48/4 x 12	257	90	40
93.868	2.0 ml	48/4 x 12	257	90	40
93.850.001	5 ml	18/3 x 6	137	70	40
93.1431.001	5 ml	48/4 x 12	257	90	40

## IsoFreeze® rack

Many sample preparations require consistent and reliable sample cooling. For temperature-sensitive applications, such as the analysis of enzymes, PCRs or cell-based assays, but also for the careful thawing of samples and the stopping of reactions, SARSTEDT offers the IsoFreeze® Rack, a pipetting and storage station with reliable temperature control. After freezing, the rack keeps the sample temperature at 4 °C for up to 3.5 hours with the lid in place. If the IsoFreeze® Rack warms above 7 °C, the color noticeably changes from purple to pink. An additional advantage of the IsoFreeze® Rack is a minimized contamination risk, since the samples no longer have to be stored on ice.

### Ordering information – IsoFreeze® rack for 1.5 ml and 2.0 ml micro tubes and screw-cap micro tubes

Order no.	Capacity/format	Length	Width	Height
95.983	24/4 x 6	146	105	70



## Plastic storage boxes

For the convenient storage of micro tubes with a volume of 1.5 ml and 2.0 ml, SARSTEDT offers high-quality polypropylene storage boxes which are suitable for long-term storage down to -90 °C.

Advantages of the plastic storage boxes:

- Hinged or slip-on lids – suitable handling for all types of storage
- Alphanumeric marking in the box – easy sample identification
- Autoclavable – simple hygienic cleaning (121 °C, 20 min.)
- Cold resistant – reliable storage down to -90 °C
- Six colors – quick identification of the desired storage box

### Slip-on lid boxes

- dimensions: 130 mm x 130 mm x 45 mm (L x W x H)
- 81 tube storage capacity
- grid format 9 x 9

### Hinged lid boxes

- dimensions: 150 mm x 140 mm x 55 mm (L x W x H)
- 100 tube storage capacity
- grid format 10 x 10

### Ordering information – Plastic storage boxes

Color	Slip-on lid	Hinged lid	Packaging bag/case
transparent	93.876	93.877	5/20
pink	93.876.281	93.877.210	5/20
orange	93.876.381	93.877.310	5/20
yellow	93.876.481	93.877.410	5/20
green	93.876.581	93.877.510	5/20
blue	93.876.681	93.877.610	5/20



## Cardboard storage boxes

SARSTEDT cardboard storage boxes enable the safe and light-protected storage of micro tubes of all sizes. Their grid inserts with storage space for 100 or 81 tubes and the large inscribable lid allow for neat organization of the samples. Storage at -80 °C is easily possible, even over a long period, due to the resistance of the moisture-repellent, sealed, stable and cold-resistant cardboard material.

### Ordering information – Cardboard storage boxes

Order no.	Capacity/format	Suitable for	Length	Width	Height
95.064.923	100/10 x 10	0.5 ml	135	135	34
95.064.997	100/10 x 10	1.5 ml / 2.0 ml	135	135	45
95.064.981	81 / 9 x 9	1.5 ml / 2.0 ml	135	135	45

## Styrofoam containers

Due to their insulating properties, Styrofoam containers are particularly suitable for storing temperature-sensitive reagents and samples. The small container in particular, with a storage capacity of 20 micro tubes, can also be used as a practical rack on the laboratory bench.

### Ordering information – Styrofoam container for 1.5 ml and 2.0 ml micro tubes

Order no.	Capacity/format	Lid	Length	Width	Height
95.1439	100/5 x 20	without	390	80	50
95.064.249	100/5 x 20	✓	340	100	65
95.064.259	20/5 x 4	✓	100	85	65





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

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**SARSTEDT**

**Revolver Workstation**

- Designed to accommodate a range of tube sizes in one rack
- Each unit with 20 mm to 30 mm offset
- Units are rotatable and freely interchangeable
- Ideal for use in the temperature range from -80°C to 121°C
- 1 x 191 x 114 mm wide; 108 x 108 x 202 (110 x 108 x 208 mm)

Model	Volume	Material
Revolver Workstation	1.5 ml	PS

**SARSTEDT**

**ELISA Plates**  
Micro Test Plates for Immunoanalytics

**SARSTEDT**

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

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