High Quality Pipette Tips

for Consistent and Reliable Results

Simplifying Progress

SARTORIUS

Excellence in Quality and Convenience

Sartorius pipette tips ensure the performance of Sartorius pipettes and repeatability of your results like no other tip can. They have been designed and manufactured to meet the highest quality and purity standards and to be the inert protectors of your samples. Moreover, correctly fitting tips protect the pipette's tip cone from wear and tear.

Sartorius tip packages are designed to make the daily work of lab professionals easier. Our offering covers a variety of functional tip package options with various purity ratings.

The high purity and consistent quality of Sartorius tips provide your valuable samples with the ultimate protection from contamination. We adhere to strict quality standards and control procedures – from raw material to automated manufacturing and packaging.

Pure Quality

- Tips are manufactured using a fully automated process in ISO class 8 cleanroom conditions to ensure purity
- Strict standards, followed from R&D to production: ISO 9001, ISO 140001, and ISO 13485
- Tips are tested and certified to be free of DNase, RNase, human DNA and endotoxins
- Using Sartorius tips with Sartorius pipettes guarantees perfect tip sealing, ensuring reliable results with high precision and accuracy
- Tip-purity certificates can be easily downloaded from our website, www.sartorius.com
- Tips are manufactured using virgin polypropylene without any additives

Convenient

- Smart color codes make it quick and easy to find the right tip for your pipette
- Versatile package options are available for various needs
- Sartorius pipettes feature Optiload and Optiject functions for smooth tip attachment and ejection
- Pre-sterilized tips with or without filters are available for demanding applications
- Universal design optimized for Sartorius pipettes

Fully Compliant

- Every tip package is clearly marked with the volume, color code, purity grade, expiry date, product code, and lot number
- The lot number enables full traceability

High Quality Tips for Various Pipetting Applications

Optifit Tips – Standard Multipurpose Tips for Various Applications

Optifit Tips are high-quality standard tips and an excellent choice for various applications. Non-filter Optifit Tips are available in various purity levels and package options. Optifit Tips are also fully autoclavable at 121 °C for 20 minutes with 1 bar / 100 kPa pressure.

Optifit Tip Range
- Extended and wide-bore tips for specific applications
- Pre-sterilized and non-sterile
- Purity certified Single Tray racks and Refill Packs
- Refill Towers and Bulk packages
- Volume range from 10 µL to 10 mL

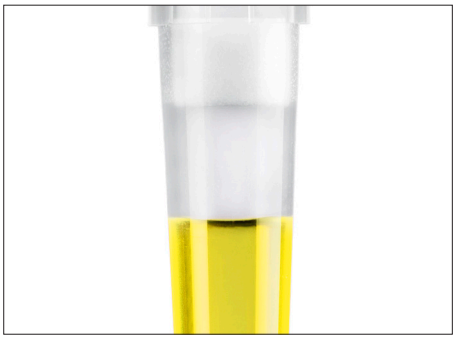
Safetyspace® Filter Tips – Filter Tips for Contamination Protection

Safetyspace® Filter Tips offer optimal protection for your samples from cross contamination and enable you to use the full volume of the tip with any pipetting mode. They feature the unique Safetyspace® air gap that leaves additional space between the liquid and the filter that conventional filter tips do not have. This extra space prevents the liquid from touching, and permeating, the filter and thus guarantees the pipetting accuracy and prevents contamination.

Safetyspace® Filter Tips provide protection from contamination for pipettes and samples in the following applications:
- Molecular biology
- Microbiology
- Cell culture
- Radioactive work

Safetyspace® Filter Tip Range
- Pre-sterilized
- Purity certified Single Tray racks
- Volume range from 10 to 5,000 µL

Unique Safetyspace® Feature



Safetyspace® – the additional space between the sample and filter.

Safetyspace® Filter Tips have additional space between the sample and filter. Any liquid types and pipetting techniques can be applied without the risk of the liquid permeating the filter.

The extra space is particularly beneficial in the following applications:

- Pipetting foaming liquids such as buffers and proteins
- When using electronic pipettes with multiple dispensing functions
- Reverse pipetting

A Convenient Range of Package Options

Sartorius tip packages are designed to make the daily work of lab professionals easier. Our offering covers a variety of functional tip packages with various purity ratings.

Smart color codes make it quick and easy to find exactly the right tip for your pipette. The trays, racks, and non-filter tips are fully autoclavable at 121 °C, 20 minutes, 1 bar/100 kPa. All tips, trays, and racks are made of 100 % pure polypropylene and are fully recyclable.

Single Tray Racks
- 96 tips in convenient and reusable tray racks
- Tips are tested and certified to be free of DNase, RNase, human DNA and endotoxins
- Informative rack labelling enables easy tip identification and traceability
- Hermetically sealed plastic wrapping ensures purity
- Empty racks can be easily reloaded with tips from Refill Towers and Packs

Refill Tower
- Reuse and reload empty racks easily
- Reduce plastic waste
- Save space: 10 × 96 tips in each tower
- Available in the most widely used tip sizes: 10 µL, 200 µL, and 350 µL
- 100% recyclable, FSC-certified cardboard package
- ACT label by My green lab for environmental impact factor evaluation

Refill Packs
- Reuse and reload empty racks easily
- Tips are tested and certified to be free of DNase, RNase, human DNA and endotoxins
- Individually packed hermetically sealed tip trays for maximum purity
- Pre-sterilized option available

FlexiBulk®

- Fast and convenient reloading of racks due to orderly packed tips.
- Compact and airtight resealable plastic package
- Tips are tested and certified to be free of DNase, RNase, human DNA and endotoxins

Bulk in a Box

- Economical resealable bag of tips
- Available in 10 µL, 5 mL, and 10 mL

Ordering Information

Optifit Tips

Volume Range	Length	Packaging	Purity Level		Tips/Unit	Order Code
			Free of DNase, RNase, human DNA & endotoxins	Pre-sterilized		
0.1 – 10 µL	31.5 mm	Single Tray	▪		10 × 96	790010
		Single Tray	▪	▪	10 × 96	790011
		Refill Tower			10 × 96	790012
		Refill Pack	▪	▪	20 × 96	790013
		Bulk in Bag			1,000	790014
0.5 – 200 µL	51 mm	Single Tray	▪		10 × 96	790200
		Single Tray	▪	▪	10 × 96	790201
		Refill Tower	▪		10 × 96	790202
		Refill Pack	▪	▪	15 × 96	790203
		FlexiBulk®	▪		960	LH-B790204
5 – 350 µL	54 mm	Single Tray	▪		10 × 96	790350
		Single Tray	▪	▪	10 × 96	790351
		Refill Tower			10 × 96	790352
		Refill Pack	▪	▪	15 × 96	790353
		FlexiBulk®	▪		960	LH-B790354
10 – 1,000 µL	71.5 mm	Single Tray	▪		10 × 96	791 000
		Single Tray	▪	▪	10 × 96	791001
		Refill Pack	▪		10 × 96	791002
		Refill Pack	▪	▪	10 × 96	791003
		FlexiBulk®	▪		480	LH-B791004

For your guidance the tips are shown here in the actual size.

Volume Range	Length	Packaging	Purity Level		Tips/Unit	Order Code
			Free of DNase, RNase, human DNA & endotoxins	Pre-sterilized		
10 – 1,000 µL Wide bore tip	68.5 mm	Single Tray	▪		10 × 96	791020
		Single Tray	▪	▪	10 × 96	791021
		FlexiBulk®	▪		480	LH-B791024
						
50 – 1,200 µL	71.5 mm	Single Tray	▪		10 × 96	791 200
		Single Tray	▪	▪	10 × 96	791201
		Refill Pack	▪		10 × 96	791202
		Refill Pack	▪	▪	10 × 96	791203
		FlexiBulk®	▪		480	LH-B791204
						
100 – 5,000 µL	150 mm	Single Tray	▪		50	780304
		Single Tray	▪	▪	50	780305
		Bulk in Bag			100	780300
		Bulk in Bag			1,000	780308
						
100 – 10,000 µL	164 mm	Single Tray	▪		4 x 35	LH-799000
		Bulk in Bag			210	LH-799004
						

Ordering Information

Safetyspace® Filter Tips

Volume Range	Length	Packaging	Purity Level		Tips/Unit	Order Code
			Free of DNase, RNase, human DNA & endotoxins	Pre-sterilized		
0.1 – 10 µL	31.5 mm	Single Tray	▪	▪	10 × 96	790011F
0.5 – 20 µL	51 mm	Single Tray	▪	▪	10 × 96	790021F
2 – 120 µL	51 mm	Single Tray	▪	▪	10 × 96	790101F
0.5 – 200 µL	52.5 mm	Single Tray	▪	▪	10 × 96	790201F
0.5 – 300 µL	52.5 mm	Single Tray	▪	▪	10 × 96	790301F
50 – 1,000 µL	78 mm	Single Tray	▪	▪	10 × 96	791001F
50 – 1,200 µL	90 mm	Single Tray	▪	▪	10 × 96	791211F
100 – 5,000 µL	150 mm	Single Tray	▪	▪	50	LH-795001F








For your guidance the tips are shown here in the actual size.
Filter tips are not recommended to be used simultaneously with Safe-Cone Filters.

Extended Standard Tips

Volume Range	Length	Packaging	Purity Level		Tips/Unit	Order Code
			Free of DNase, RNase, human DNA & endotoxins	Pre-sterilized		
0.1 – 10 µL	46 mm	Single Tray	▪		10 × 96	783210
		Single Tray	▪	▪	10 × 96	783211
0.5 – 200 µL	77.5 mm	Single Tray	▪		10 × 96	LH-X780200
		Single Tray	▪	▪	10 × 96	LH-X780201
10 – 1,000 µL	119 mm	Single Tray	▪		10 × 96	LH-X791000
		Single Tray	▪	▪	10 × 96	LH-X791001
50 – 1,200 µL	90 mm	Single Tray	▪		10 × 96	791210
		Single Tray	▪	▪	10 × 96	791211
		Refill Pack	▪		10 × 96	791212
		Refill Pack	▪	▪	10 × 96	791213

Extended Filter Tips

0.1 – 10 µL	46 mm	Single Tray	▪	▪	10 × 96	783201
0.5 – 200 µL	77.5 mm	Single Tray	▪	▪	10 × 96	LH-XF780201
10 – 1,000 µL	119 mm	Single Tray	▪	▪	10 × 96	LH-XF791001

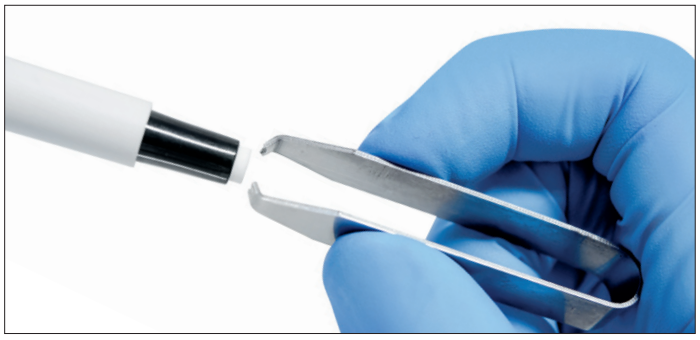
For your guidance the tips are shown here in the actual size.
Extended filter tips are not recommended to be used simultaneously with Safe-Cone Filters.
The liquid handling properties of extended tips might differ from standard Optifit tips.

Protect Your Pipette and Sample with Safe-Cone Filters

Safe-Cone Filters act as a final barrier to prevent any fluids and liquid vapors from coming into contact with the internal components of the pipette. These unique and replaceable filters are made of polyethylene (PE). They:

- Protect the pipette and sample from contamination
- Prolong the pipette's lifetime
- Reduce maintenance intervals

Safe-Cone Filters should not be used together with filter tips.



Removing the Safe-Cone Filter

Plus Filter
For more demanding applications such as radioactive work, cell culture, bacterial and virological work, and molecular biology.

Standard Filter
For general applications. These filters can be used for the same applications as the Plus filter, but need to be changed more frequently.

Safe-Cone Filters

Order Code	Item	Qty / Unit
721008	Standard Ø 2,51 mm PE	50
721007	Standard Ø 3,15 mm PE	50
721006	Standard Ø 5,33 mm PE	50
721005	Standard Ø 6,73 mm PE	50
721014	Standard Ø 1,83 mm Polyolefin	50
721018	Plus Ø 2,51 mm PE	50
721017	Plus Ø 3,15 mm PE	50
721016	Plus Ø 5,33 mm PE	50
721015	Plus Ø 6,73 mm PE	50

PE = polyethylene


MENU EDIT ADV
Pipetting
10.00 µL
PICUS 2
SARTORIUS
121°C

Responsible Manufacturing

At Sartorius, we understand our responsibility as a single-use plastic consumable manufacturer. This is why we pay particular attention to the environmental impact of our operations and products, throughout their life cycle: from product design, packaging, production technology and all the way through product end of life treatment.

Environmentally Friendly Design

Beginning at the design stage, we look for ways of reducing the number of plastics and hazardous substances and materials we use. In our approach, we also look at the production process, energy and waste streams, and all the way to our office spaces. Let's look at how the design of the various packaging options can help you choose the best options for your lab:

- The single tray pipette tip boxes are intended for applications requiring the utmost purity of products and are designed to have a small plastic footprint (Fig 1.).
- The refill packages, in contrast, are designed to offer a reduced plastic footprint, while maintaining product purity. The refill pack has 34% less plastic compared to the single tray product. This is equivalent of approximately 38 water bottles per package compared to a single tray box (Fig 2.).

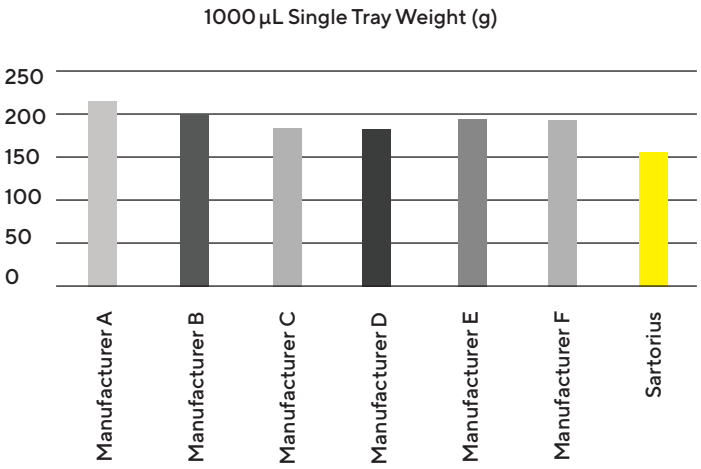


Figure 1. Amount of plastic in single tray boxes of several single-use pipette tip manufacturers. Sartorius's single tray tip box is designed to use the least amount of plastic possible, while also providing a stable box from which to pick pipette tips.

Note: the average 0.5 L water bottle weighs 10 g.

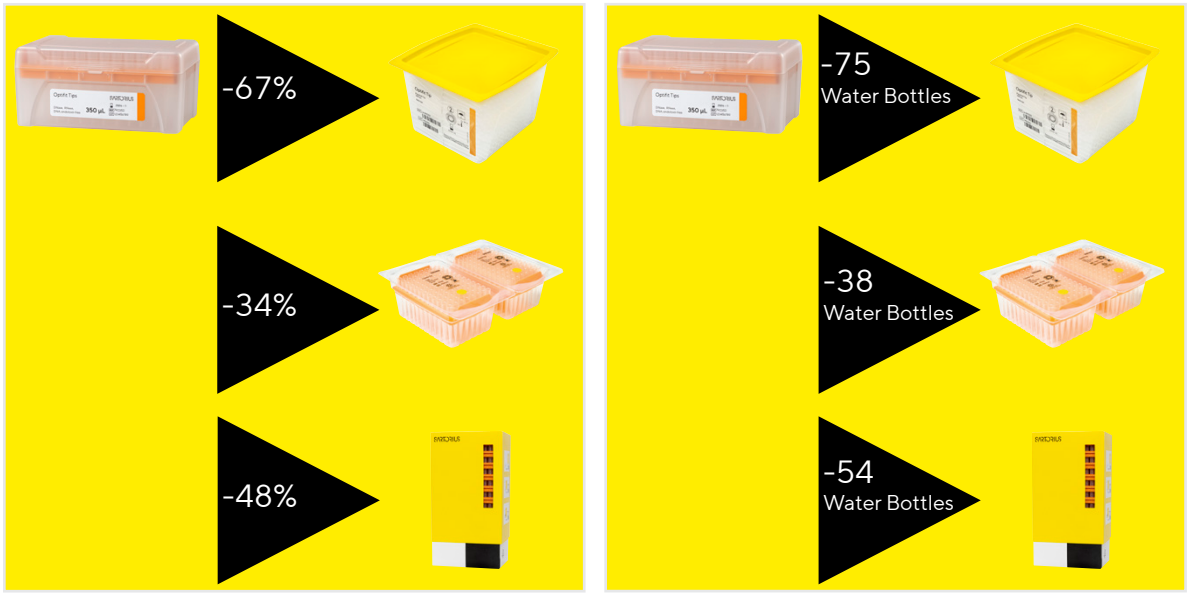


Figure 2. Reduced weight of total plastic material per 960 tips when compared to single tray package. Comparison performed using 350 µL Optifit Tip products.

Environmentally Friendly Manufacturing

At our manufacturing sites, we have invested in production technologies that generate less waste. Our pipette tip production facility in Kajaani, Finland uses 100 % renewable electricity and has achieved a waste recovery rate of 98 %. Additionally, plastic waste from Sartorius pipette tip manufacturing is recycled for use as raw materials for other plastic products. We are continuously working to reduce our environmental impact, and to drive this, Sartorius Liquid Handling complies with ISO 14001 environmental standards.

ACT.
The Environmental Impact Factor Label

Recyclable Materials

- The plastic material used in the products and their packaging is suitable for recycling or use in waste-to-energy facilities (Fig 3.). For example, tips and tip racks made of 100 % polypropylene (PP) can be fully recycled as energy waste. The cardboard packages are made from recycled material and are fully recyclable.

- The Refill Tower system is an ecological yet practical option that reduces the total waste of all product packaging by up to 61% and plastic by up to 48% compared to single tray box tips. Thanks to the small footprint of the product, this option can help reduce transportation emissions, as the package is only one-third the size of a single tray package, yet it contains the same number of pipette tips.

  The Refill Tower has obtained the ACT-label that is administered by the non-profit organization My Green Lab. The label serves as a sustainability metric for laboratory products, evaluating them across various environmental criteria to provide a clear picture of their ecological impact

- Finally, the FlexiBulk tip pack is the most ecological and economical choice. This package uses up to 67% less plastic and weighs 30% less compared to the single tray option. The amount of plastic saved per package is comparable to 75 water bottles and the package itself is less than half the size of the single tray package, which further reduces emissions from shipping.

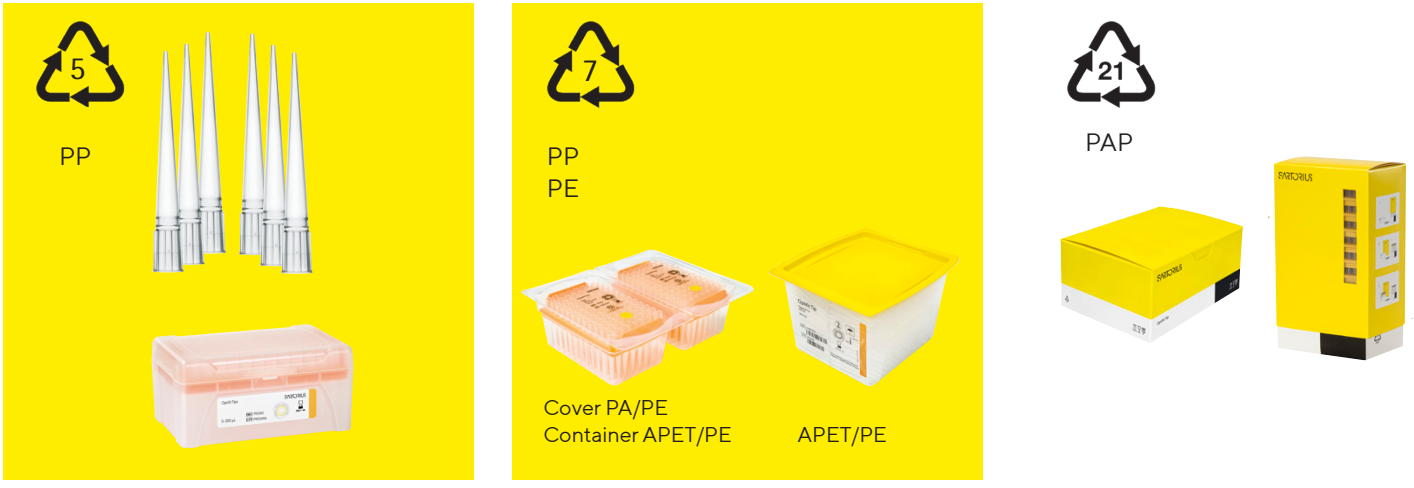


Figure 3. The plastic material used in the products and their packaging is suitable for recycling or use in waste-to-energy facilities. For example, tips and tip racks made of 100% polypropylene (PP) can be fully recycled as energy waste.

The tip box, tray and pipette tips are made from polypropylane. These materials, including the pipette tips, can be recycled if they have not been in contact with hazardous materials. Sales unit packages and Refill Tower packages are made from recyclable cardboard. The FlexiBulk and refill package material are mixed plastic; therefore, follow local guidelines for recycling. The air-tight wrapping of the tip boxes, flexiBulk and refill package material are mixed plastic; therefore, follow local guidelines for recycling.

Resin identification codes (RIC) defined by the European Commission.

Sartorius Design and R&D – The Driving Force Behind Our High-Quality Products

Customer needs are always the starting point when developing and manufacturing Sartorius pipettes and pipette tips. As our customers have their own unique preferences and because pipetting needs vary between applications and users, we provide our customers with liquid handling equipment that matches their applications precisely and fulfills even the strictest quality standards. Ergonomics, performance, and reliability are the cornerstones of our design and product development processes. Strong technical innovation and the latest design and manufacturing technologies ensure the high quality and performance of our products.

Sartorius has a rich and extensive history in liquid handling. Our experience and knowledge of pipette and pipette tip design has resulted in several award-winning innovations and products. The Sartorius liquid handling competence center masters the entire value chain, from customer needs and product design to manufacturing. Our in-house R&D capabilities with experienced liquid handling experts enable continuous product and process development and the creation of new, innovative solutions. Designing Sartorius tips goes beyond mere tip geometry: our R&D team also designs the tip molds in order to ensure the highest possible quality and consistency.

Sartorius has modern production facilities for pipettes and tips. Our highly automated tip manufacturing facility allows us to maintain the highest quality and purity standards by selecting the best plastic materials and controlling the manufacturing process from beginning to end. Our quality management system follows not only ISO 9001 and ISO 14001, but also ISO 13485. Tip production also complies with the ISO 14644-1 standard, in order to fulfill ISO Class 8 cleanroom conditions for guaranteed tip purity.

GERMAN DESIGN AWARD WINNER 2017

reddot award 2016
winner

Ensure the Highest Pipetting Performance and Precision

Sartorius tips are designed and manufactured to perfectly fit with Sartorius pipettes enabling maximum tip sealing and accuracy.

Pipette Tip Selection Guide

			Picus®, Picus® NxT and Picus® 2									
Electronic Pipettes			**1-ch**						**8 & 12-ch**			
	Color Code	**µL**	**0.5 – 10**	**5 – 120**	**10 – 300**	**50 – 1,000**	**100 – 5,000**	**500 – 10,000**	**0.5 – 10**	**5 – 120**	**10 – 300**	**50 – 1,200**
Optifit Tips	■	10	■						■			
	■	10 Ext.	■						■			
	■	200		■						■		
	■	200 Ext.		■						■		
	■	350			■						■	
	■	1,000				■						
	■	1,000 Ext.				■						
	■	1,000 WB				■						
	■	1,200										■
	■	1,200 Ext.										■
	■	5,000					■					
	■	10 mL						■				
Safetyspace® Filter Tips	■	10	■						■			
	■	10 Ext.[1]	■						■			
	■	20										
	■	120		■						■		
	■	200										
	■	200 Ext.[1]		■						■		
	■	300			■						■	
	■	1,000				■						
	■	1,000 Ext				■						
	■	1,200										■
	■	5,000					■					
Safe-Cone Filters[2]	Ø 1.83 mm											
	Ø 2.51 mm			■						■		
	Ø 3.15 mm				■						■	
	Ø 5.33 mm					■						■
	Ø 6.73 mm						■	■				

[1] Filter tip with standard air gap. In tests, 10 µL extended tip's systematic error and random error results, deviated slightly from those of the 10 µL tip.
[2] It is not recommended to use Safe-Cone filters and Safetyspace® Filter tips at the same time.

Ensure the Highest Pipetting Performance and Precision

Sartorius tips are designed and manufactured to perfectly fit with Sartorius pipettes enabling maximum tip sealing and accuracy.

Pipette Tip Selection Guide

			Tacta®										Proline® Plus										
Mechanical PIpettes			1-ch								8 & 12-ch			1-ch								8 & 12-ch	
	Color Code	µL	0.3 – 3	1 – 10	2 – 20	10 – 100	20 – 200	100 – 1,000	500 – 5,000	1 – 10 mL	1 – 10	10 – 100	30 – 300	0.3 – 3	0.5 – 10	2 – 20	5 – 50	10 – 100	20 – 200	100 – 1,000	500 – 5,000	1 – 10 mL	1 – 10	10 – 100	30 – 300
Optifit Tips		10	■	■							■			■	■								■		
		10 Ext.	■	■							■			■	■								■		
		200			■	■	■					■				■	■	■	■					■	
		200 Ext.			■	■	■					■				■	■	■	■					■	
		350											■												■
		1,000						■												■					
		1,000 Ext.						■												■					
		1,000 WB						■												■					
		1,200																							
		1,200 Ext.																							
		5,000							■												■				
		10 mL								■												■			
Safetyspace® Filter Tips		10	■	■							■			■	■								■		
		10 Ext.[1]	■	■							■			■	■								■		
		20			■											■									
		120				■						■					■	■						■	
		200					■												■						
		200 Ext.[1]				■	■					■					■	■	■					■	
		300											■												■
		1,000						■												■					
		1,000 Ext.						■												■					
		1,200																							
		5,000							■												■				
Safe-Cone Filters[2]		Ø 1.83 mm			■											■									
		Ø 2.51 mm				■						■					■	■						■	
		Ø 3.15 mm					■						■						■						■
		Ø 5.33 mm						■												■					
		Ø 6.73 mm							■	■											■	■			

[1]Filter tip with standard air gap.
[2] It is not recommended to use Safe-Cone filters and Safetyspace® Filter tips at the same time.

Ergonomic and Reliable Sartorius Pipettes
Sartorius pipettes provide the perfect solution for your liquid handling needs. Sartorius pipettes and tips fit seamlessly together and provide you with maximum pipetting performance and exact accuracy and precision. Sartorius offers the leading range of superior electronic and mechanical pipettes.

For more information, visit www.sartorius.com.

Sartorius also provides pipette maintenance, repair, and calibration services globally. Contact your nearest Sartorius service center or office for more information.

Sartorius ABC of Tip Purity

Additive-free
Manufacturing tips from pure virgin polypropylene minimizes the risk of substances from the tip material leaching into samples. This is why Sartorius tips are free of colors, clarifying agents, and plasticizers.

DNase-free
DNases are powerful enzymes (nucleases) that degrade DNA by hydrolyzing it into short fragments. Even trace amounts of DNases can lead to low or no yields in DNA techniques such as PCR. DNase contamination sources are human contact and bacteria. DNase-free tips are tested for DNase activity with fluorometric assay by detecting degradation of labeled DNase substrate. DNase-free pipette tips show no evidence of DNase activity in the assay with a detection level of $< 6{,}25*10^{-5}$ U/µL when DNase I was used as a standard.

Endotoxin-free
Endotoxins are lipopolysaccharides that are part of the outer membrane of Gram-negative bacteria. They cause fever in humans and impair the growth of cell cultures. Endotoxins are very durable and are present wherever bacteria are able to grow, i.e. air, water, soil, skin, raw materials, and in any non-sterile environment. When certified endotoxin free, the tips are tested according to FDA guidelines for medical devices. The Ph. Eur. 2.6.14, Method D. Validated test result for endotoxin-free tips is < 0,005 IU/mL (EU/mL).

Human DNA-free
Sartorius purity certified tips are analyzed for the presence of DNA using quantitative PCR and human DNA specific primers. The determined detection limit of the assay is <1 pg/µL.

RNase-free
RNases are enzymes that catalyze the degradation of RNA into short fragments. These very stable enzymes are difficult to remove and originate from human skin, hair, and saliva, as well as from bacteria. Tips are tested for RNase activity using fluorometric assay. RNase-free tips show no evidence of RNase activity with a detection level of $<1*10^{-8}$ U/µl.

Sterilization
The destruction of all microbial life, including bacterial endospores. Sterility can be accomplished using, for example, steam, heating, chemicals, or radiation. Sartorius pre-sterilized tips are sterilized with an electron beam (beta irradiation) in accordance with ISO 11137-1 and ISO 13004 standards and the process is validated by using 20 kGy as the minimum dose, with an SAL (sterility assurance level) of 10^{-6}.

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Status: 05 | 2025