

More liquid repellent than PTFE!



Ultra Low Retention Pipette Tips and Filter Tips

H I G H - T E C H D I S P O S A B L E S

The new ultra-hydrophobic Ultra Low Retention pipette and filter tips from BRAND.

A patented surface treatment is used to make the polypropylene of the pipette tips extremely liquid repellent – costly sample loss during pipetting is reduced to a minimum.

■ **Ultra-hydrophobic**

Ideal for biological samples that contain detergents such as Triton® X-100, SDS, Tween etc.

■ **Special patented process**

No coatings that might lead to sample contamination.

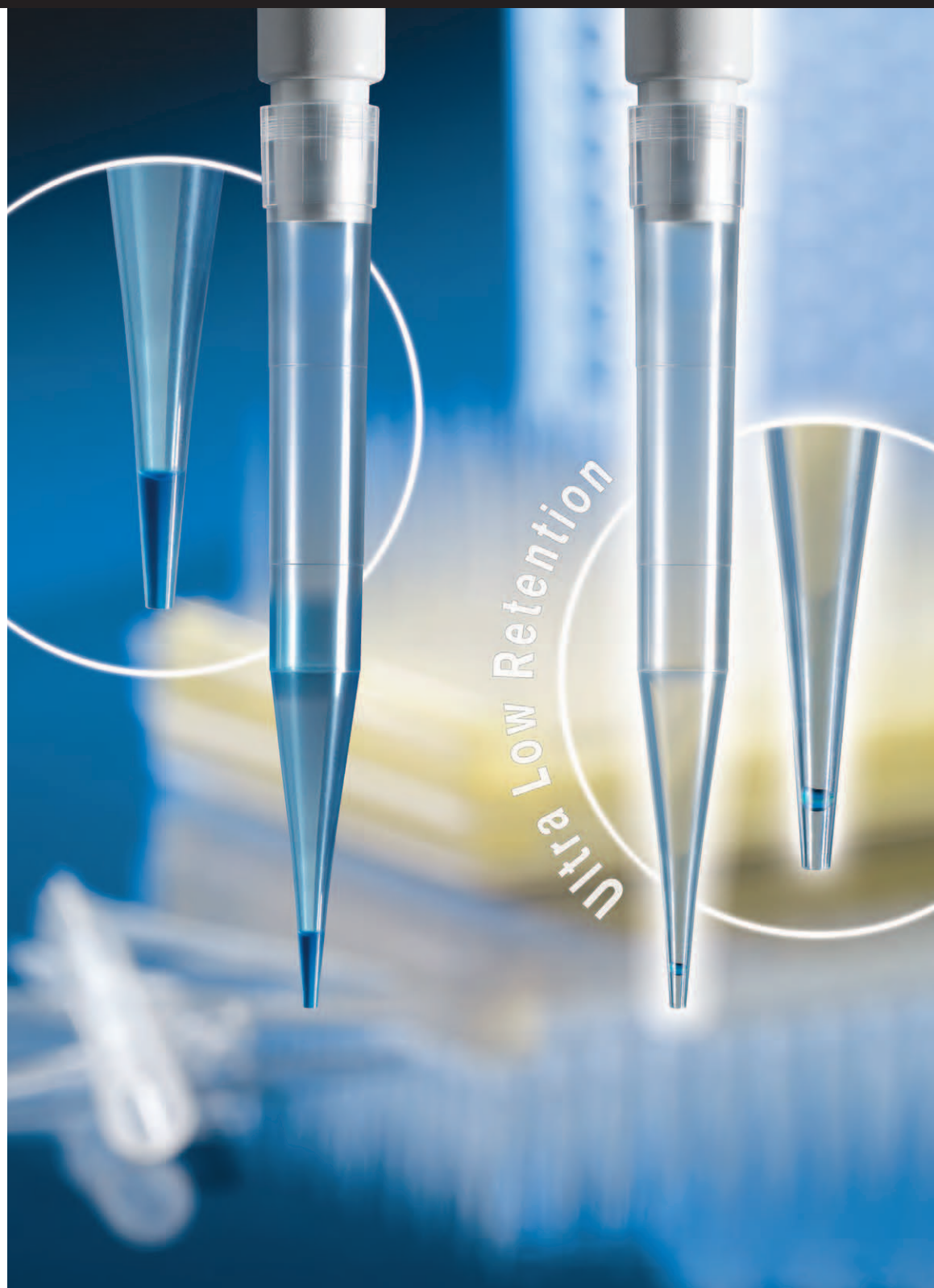
■ **Highly homogeneous surface**

No defect sites, so no non-specific binding.

■ **High chemical resistance**

Ideal for working with solvents.

■ **Autoclavable**



CE

IVD

A Persistent Problem

Limited volume samples; costly reagents, expensive enzymes, foaming liquids – all of which need to be pipetted with high precision.

Close visual inspection of conventional pipette tips reveals that fluid droplets or a thin film of liquid can remain in the pipette tip after dispensing. Significant factors leading to the formation of such residues are the different surface energy components of the pipette tips and the sample being pipetted, as well as their molecular composition.

The Detergent Dilemma

In biological applications such as in PCR, PAGE, or many other areas of protein chemistry, the sample must often be treated with detergent. An exact appraisal of the behavior of PP surfaces is complicated. Detergents significantly decrease the surface tension of liquids, which hinders the optimal dispensing of the liquid from the pipette tip and diminishes pipette performance.

A Slick Solution

The new, ultra-hydrophobic BRAND pipette and filter tips solve this problem!

The surfaces of the Ultra Low Retention tips are produced through a special, patented physicochemical process. The homogeneous, defect-free surface thus produced has extremely low surface tension.

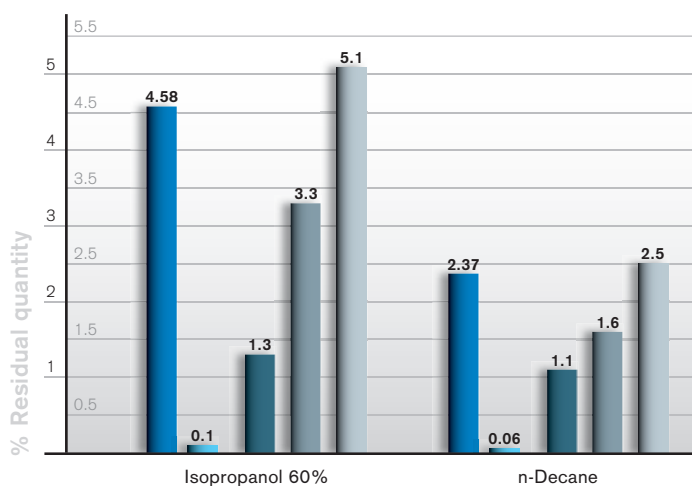
This significantly reduces sample loss and provides substantially higher reproducibility when working with critical media.

Surface	Surface tension
BRAND® PP Ultra Low Retention	9 mN/m
PTFE	19 mN/m
Silicone	21.5 mN/m
Untreated PP	30 mN/m
Water	72 mN/m

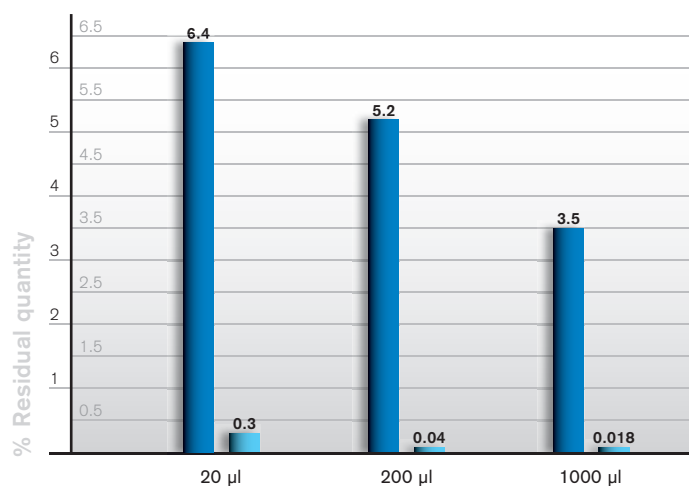


Ultra Low Retention:

- The ultra-hydrophobic surface of the new tips is over 3 times more liquid repellent than untreated polypropylene.
- No additives that can be leached out! No silicization of the surface!
- The high transparency of the tips remain unchanged by the treatment.
- The tips can be autoclaved at 121 °C (20 min) without damaging the material properties.



Standard and Ultra Low Retention BRAND pipette tips compared with low retention tips from other manufacturers.



Standard and Ultra Low Retention BRAND pipette tips compared to pipetting with various volumes. Medium: glycerin 60%

High Purity Polypropylene

Sensitive applications, such as enzyme tests, PCR or DNA/RNA purification, require plastic disposable products of the highest quality. Specially selected transparent PP types, **free from the additives di-(2-hydroxyethyl)methyl dodecyl ammonium (DiHMDA) and 9-octadecenamide (oleamide)**, are used for manufacturing BRAND pipette tips.

Both of these additives are frequently found in PP granules, and can interfere with biological tests, leading to spurious results (see last page ¹⁾ for reference).

Tips and filter tips from BRAND are produced strictly under the most modern cleanroom conditions (ISO 14 644-1 Class 8). BIO-CERT® products undergo stringent additional testing.

What does

BIO-CERT® quality really mean?

BIO-CERT® products are certified to be:

Sterile

BIO-CERT® products are sterilized according to ISO 11 137 and AAMI guidelines with β -radiation, using a minimum radiation dose of 12.1 kGy. This gives a SAL (sterility assurance level) of 10^{-6} . The sterility meets USP 29 and Ph. Eur. requirements for sterility.

Free of endotoxins

The endotoxin concentration in BIO-CERT® products is tested by a gel-clotting Limulus Amoebocyte Lysate test. The detection limit is 0.01 EU/ml, providing a documented endotoxin level of less than 1×10^{-12} g/item.

Free of DNA and RNase

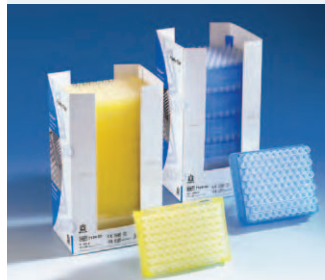
BIO-CERT® products are DNA-free ($< 4 \times 10^{-12}$ g/item) to prevent false positive signals during PCR applications. These products are free of RNases ($< 8.6 \times 10^{-15}$ g/item) to prevent degradation of RNA during purification processes.

Free of ATP

BIO-CERT® products are certified to be free of ATP (ATP concentration $< 1 \times 10^{-15}$ g/item) and therefore suitable for ATP detection using bioluminescence-systems.

BIO-CERT® products are supplied with a certificate.

Racked Pipette Tips, Ultra Low Retention



Tip-Stack™, non-sterile

Space-saving, environmentally compatible refill system for Tip-Box N. 10 stacked racks with one Tip-Box N included.



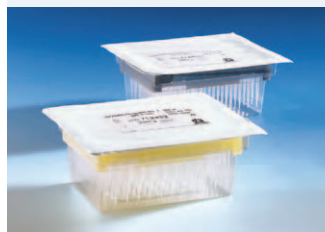
Tip-Box N, non-sterile

Made of PP. With push-on lid. Two different heights: low form for 96 tips up to 300 μ l, high form for 100 tips with 1000 μ l. Stackable and repeatedly autoclavable at 121 °C (t_e 20 min).



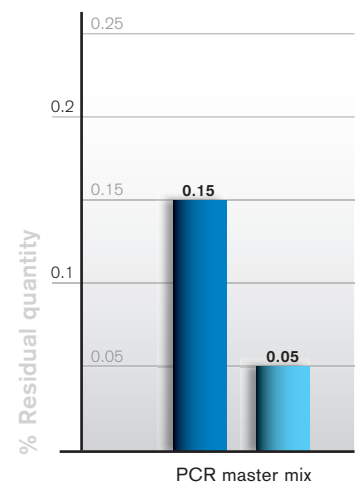
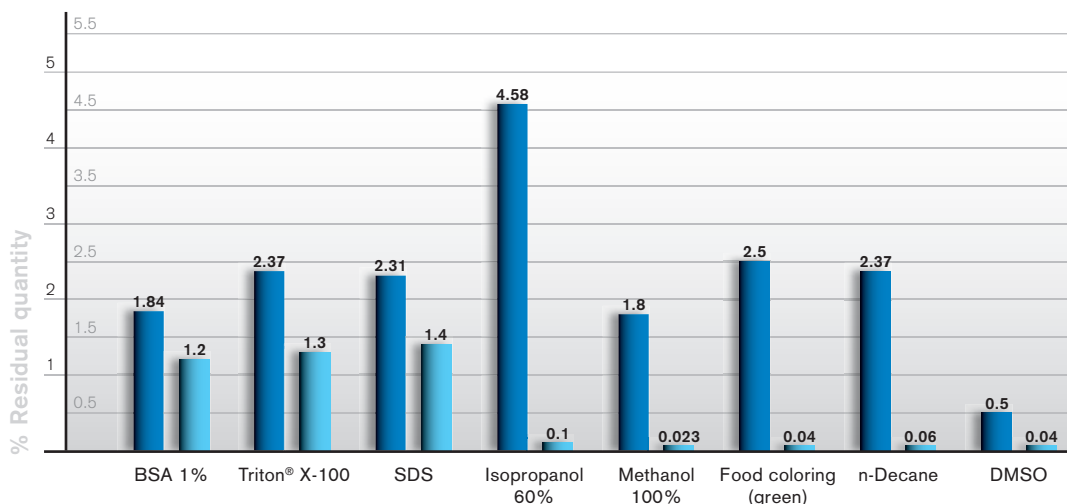
Tip-Box N, sterile, BIO-CERT®

Made of PP. With push-on lid. Stackable and repeatedly autoclavable at 121 °C (t_e 20 min). Boxes individually packed in bag with perforation.



Tip-Rack S, sterile, BIO-CERT®

Refill units suitable for the autoclaved Tip-Box N. Protected in environmentally compatible packaging of recyclable PET.



Standard and Ultra Low Retention BRAND pipette tips (volume: 200 μ l) compared with various media and subsequent photometric analysis and conversion.

Ordering Data

Ultra Low Retention pipette tips

Volume	Pack of	Cat. No.
Pipette tips, racked, Tip-Box N, non-sterile		
0.1 - 20 µl	5 x 96 (480)	7031 00
0.5 - 20 µl	5 x 96 (480)	7031 01
2 - 200 µl	5 x 96 (480)	7031 02
5 - 300 µl	5 x 96 (480)	7031 03
50 - 1000 µl	5 x 100 (500)	7031 04
50 - 1250 µl	5 x 100 (500)	7031 05
Pipette tips, racked, Tip-Box N, sterile, BIO-CERT®		
0.1 - 20 µl	10 x 96 (960)	7031 22
0.5 - 20 µl	10 x 96 (960)	7031 23
2 - 200 µl	10 x 96 (960)	7031 24
5 - 300 µl	10 x 96 (960)	7031 25
50 - 1000 µl	10 x 100 (1000)	7031 26
50 - 1250 µl	10 x 100 (1000)	7031 27
Pipette tips, racked, Tip-Stack™, non-sterile		
0.5 - 20 µl	10 x 96 (960)	7031 10
2 - 200 µl	10 x 96 (960)	7031 11
50 - 1000 µl	10 x 100 (1000)	7031 12

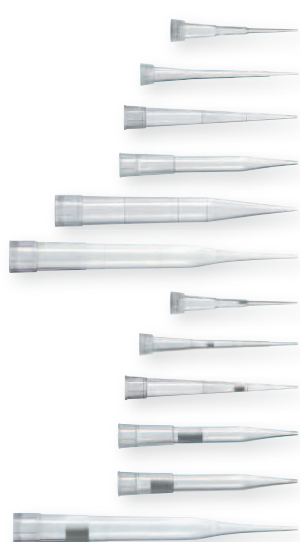
Ultra Low Retention filter tips

Volume	Pack of	Cat. No.
Filter tips, racked, Tip-Rack S, sterile, BIO-CERT®		
0.1 - 1 µl	10 x 96 (960)	7031 41
0.5 - 10 µl	10 x 96 (960)	7031 42
2 - 20 µl	10 x 96 (960)	7031 43
5 - 100 µl	10 x 96 (960)	7031 44
5 - 200 µl	10 x 96 (960)	7031 45
Filter tips, racked, Tip-Box N, sterile, BIO-CERT®		
0.1 - 1 µl	10 x 96 (960)	7031 56
0.5 - 10 µl	10 x 96 (960)	7031 57
2 - 20 µl	10 x 96 (960)	7031 58
5 - 100 µl	10 x 96 (960)	7031 59
5 - 200 µl	10 x 96 (960)	7031 60
50 - 1000 µl	10 x 100 (1000)	7031 61

- ✓ = Tip volume less than pipette's nominal volume
- *) Electronic pipettes are not available in all specified volumes
- **) Transferpette® with yellow color code



Ultra Low Retention Pipette tips/ Filter tips Volume range



Nominal volume	Transferpette® Single channel pipettes*										Transferpette®-8/-12 Multichannel pipettes*									
	1 µl	5 µl	10 µl	20 µl	20 µl**	25 µl	50 µl	100 µl	200 µl	250 µl	500 µl	1000 µl	10 µl	20 µl	25 µl	50 µl	100 µl	200 µl	300 µl	
0.1 - 20 µl	✓		✓	✓									✓	✓						
0.5 - 20 µl			✓	✓									✓	✓						
2 - 200 µl		✓			✓	✓	✓	✓	✓						✓	✓	✓	✓	✓	✓
5 - 300 µl		✓			✓	✓	✓	✓	✓						✓	✓	✓	✓	✓	✓
50 - 1000 µl										✓	✓	✓								
50 - 1250 µl										✓	✓	✓								
0.1 - 1 µl	✓		✓										✓							
0.5 - 10 µl			✓	✓									✓	✓						
2 - 20 µl		✓			✓	✓	✓	✓	✓						✓	✓	✓	✓	✓	✓
5 - 100 µl		✓			✓	✓	✓	✓	✓						✓	✓	✓	✓	✓	✓
5 - 200 µl									✓						✓	✓	✓	✓	✓	✓
50 - 1000 µl										✓	✓									

¹⁾ G. R. McDonald, A. L. Hudson, S. M. J. Dunn, H. You, G. B. Baker, R. M. Whittal, J. W. Martin, A. Jha, D. E. Edmondson, A. Holt (2008). Bioactive Contaminants Leach from Disposable Laboratory Plasticware. Science, 322 (5903), 917-917.

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