

Pipette Tips

RAININ
Pipetting 360+



Genuine Rainin Tips

BioClean Ultra™ Purity

More Sustainable Formats

Comprehensive Catalog



Quality Without Compromise
Genuine Rainin Tips

METTLER TOLEDO

Quality Without Compromise

Genuine Rainin Tips

When accuracy, reproducibility, and ergonomics matter most, choose Genuine Rainin tips. Engineered for quality without compromise, Rainin tips are precision-molded from 100% virgin medical-grade polypropylene in ISO 8 cleanrooms. Continuous batch testing with 100% visual inspection and rigorous BioClean Ultra™ purity certification ensure consistent performance and purity. Available in both Genuine Rainin LTS® LiteTouch® System and universal-fit, Genuine Rainin tips are part of a complete pipetting system designed for higher accuracy, reduced ergonomic strain, and confidence in every transfer.

Certified BioClean Ultra



BioClean Ultra sets the bar for quality with rigorous testing for RNase, DNase, human DNA, bacterial DNA, endotoxins, ATP, PCR inhibitors, protease, and protein.

Documented Quality



ISO compliant manufacturing and continuous visual, dimensional, functional, and contamination testing ensure consistent quality and traceability.

Comprehensive Catalog



Genuine Rainin tips are available in Genuine Rainin LTS and universal-fit formats, with sterile, filter, low retention, wide-orifice, extended-length, and a range of sustainable formats.



LTS System Inventor



Rainin revolutionized pipetting with the LiteTouch System. LTS virtually eliminates the harmful forces associated with tip loading/ejection and inaccuracies due to imperfect seals.

Pipetting 360+



Pipettes • Tips • Service

Precision pipettes, high-purity tips and expert service are all backed by innovative tools, software and training to ensure exceptional performance across your workflows.

Genuine Rainin Quality Purity and Performance

Rainin manufactures millions of tips every day, produced to micrometer-level precision, and tested to the rigorous BioClean Ultra purity standard. Achieving this consistency depends on a carefully designed manufacturing process, premium materials, and continuous testing.

Clean Manufacturing

Genuine Rainin tips are manufactured and packaged under Class 100,000 clean room conditions in strict conformance to ISO 9001. Minimizing direct human contact and requiring personnel to be fully gowned and wear hairnets, masks, and gloves further reduces contamination risk.

Premium Raw Material

Genuine Rainin tips are made from a carefully selected FDA 21 CFR Part 177.1520 compliant virgin polypropylene resin with:

- No additives (e.g., dyes, plasticizers, latex, or slip agents)
- Excellent molding properties
- Broad chemical resistance
- High purity and inertness
- High batch-to-batch consistency
- Resistance to autoclaving
- Minimal metal and leachables content

Precision Molding

Genuine Rainin tips are manufactured with precision molds with routine inspections to ensure consistent quality. This avoids common tip molding defects found in lower quality products:

- Thin areas of residual plastic that form between ill-fitting mold components that can disrupt seal formation and liquid movement.
- Coaxial defects impact the straightness of the tip, hampering use with multichannel pipettes.
- Incompletely formed tips hinder liquid movement.

Continuous Batch Testing

Samples from every mold cavity are visually and dimensionally inspected approximately every four hours. If defects are found, molds are immediately removed from production for cleaning or maintenance. Unlike other manufacturers, Rainin also conducts continuous batch testing for purity, enabling traceable batch-level results.

BioClean Ultra Purity

Rainin employs extremely stringent and comprehensive tip purity testing for a wide range of biological contaminants. Unlike other manufacturers, Rainin also clearly describes the testing procedure and the sensitivity of the assay for every contaminant tested, ensuring consistent purity.

Documented Quality

Every Genuine Rainin tip is backed by extensive, traceable documentation, from the high purity polypropylene resin to the exact minute of its manufacture and BioClean Ultra testing results. Certificates of Compliance are available at www.mt.com/rainin.



The BioClean Ultra limit for endotoxin is **500 times lower** than recommended by the United States Food and Drug Administration for medical devices in contact with the cardiovascular system.¹

BioClean Ultra: Sets the Standard for Tip Purity

	BioClean Ultra	Brand A	Brand B	Brand C	Brand D	Brand E	Brand F	Brand G	Brand H	Brand I	Brand J
Human DNA	< 0.32 pg	–	< 0.40 fg	< 2 pg	None detected	< 1 pg	"Free of"	–	< 30 pg	< 30 pg	"Free of"
Bacterial DNA	< 1 pg	–	–	< 50 fg	–	–	"Free of"	–	–	–	"Free of"
DNase	$\leq 10^{-7}$ KU/ μ L	"DNase Free"	–	10^{-4} KU	None detected	"Free of"	"Free of"	$< 6.25 \times 10^{-5}$ U/ μ L	$< 10^{-7}$ KU/ μ L	$< 10^{-7}$ KU/ μ L	"Free of"
RNase	$\leq 10^{-8}$ KU/ μ L	"RNase Free"	< 8.6 fg	10^{-9} KU	None detected	"Free of"	"Free of"	$< 3.125 \times 10^{-9}$ U/ μ L	$< 10^{-9}$ KU/ μ L	$< 10^{-9}$ KU/ μ L	"Free of"
Endotoxin	≤ 0.001 EU/mL	≤ 0.05 EU	< 1 pg	< 0.001 EU/mL	< 0.06 EU/mL	< 0.05 EU/mL	"Free of"	< 0.03 EU/mL	< 0.06 EU/mL	≤ 0.06 EU/mL	"Free of"
Protein	< 2 ng/sample	–	–	< 1 ng/ μ L	–	–	–	–	–	–	–
Protease	≤ 500 ng/mL	–	–	–	–	"Free of"	"Free of"	–	–	–	–
ATP	$< 2 \times 10^{-12}$ mg/ μ L	–	< 1 fg	$< 5.5 \times 10^{-12}$ mg	–	ATP-free	"ATP-free"	–	–	$< 10^{-13}$ mg/ μ L	–
PCR inhibitors	None detected	–	–	< 10 targets	None detected	–	"Free of"	–	–	None detected	–

KU Kunitz Units **EU** Endotoxin Units **ng** nanogram (Factor: 10^{-9}) **pg** picogram (Factor: 10^{-12}) **fg** femtogram (Factor: 10^{-15}) "None detected", "Free of" and "... Free" designations apparently indicate no observed contamination. No limit of detection specifications or test methodology provided. "–" no data available.

1. US Food and Drug Administration. "Pyrogen and Endotoxins Testing: Questions and Answers." (2026).

Genuine Rainin LTS

Feel the Difference

Rainin created the LiteTouch System (LTS) pipette and tip design to improve one of the most strenuous parts of pipetting—loading and ejecting tips. LTS virtually eliminates the harmful forces associated with tip loading and ejection, but also improves reproducibility by eliminating inaccuracies due to imperfect seals.

Why switch to LTS?

- Reduce your risk of pipetting-related repetitive strain injury (RSI)
- Effortless tip insertion and ejection
- Perfect seals across all channels
- Pipette all day, every day without pain or fatigue
- Achieve more accurate and consistent pipetting performance

Repetitive Strain Injury



Reduces the force needed to load and eject tips—one of the most strenuous parts of pipetting—from as high as 12 kg with universal pipettes to just 0.6 kg.

Consistent Sealing



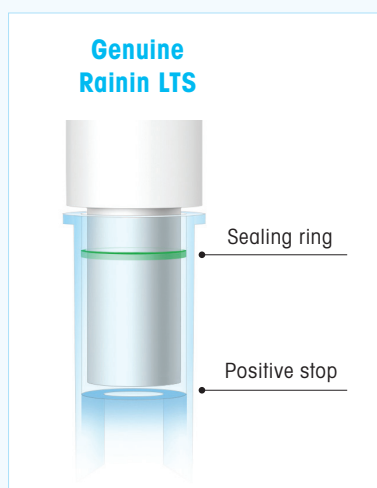
Creates a perfect seal every time with no jamming, rocking, or handtightening required. Perfect seals result in consistent sample pickup across all samples and channels.

Genuine LTS Advantage



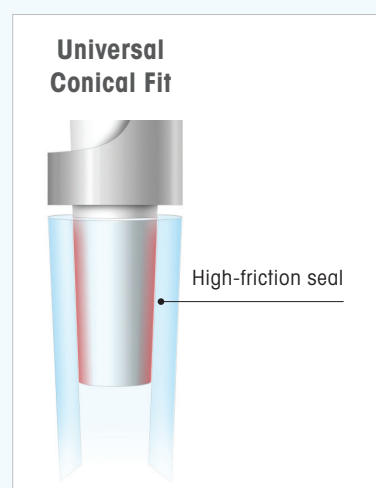
Genuine Rainin LTS tips perfectly fit Rainin LTS pipettes unlike “LTS-compatible” tips that lack the sealing ring and positive stop, resulting in higher loading and ejection forces and lower sealing uniformity.

Effortless Tip Loading and Ejection



LTS shafts and tips are cylindrical, and they work together to deliver a perfect seal every time.

- A thin sealing ring creates a tight seal with minimal force.
- A positive stop prevents over-insertion and ensures an airtight seal.
- When combined, the sealing ring and positive stop delivers high sealing uniformity, which is critical for multichannel pipettes.



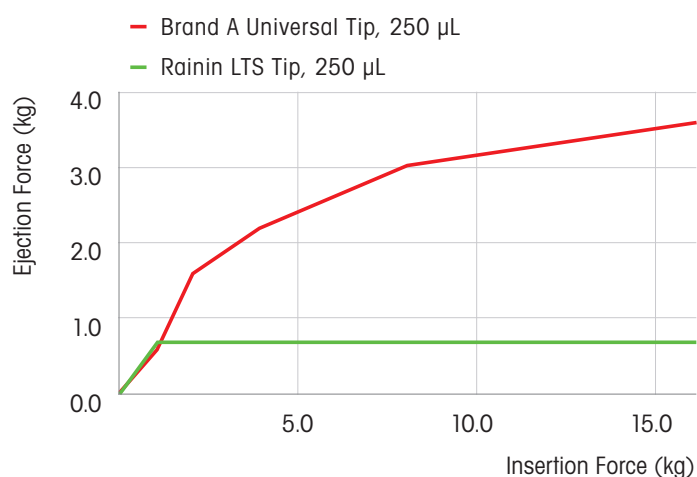
Conventional pipette shaft-ends and tips are cone-shaped, so they require high forces to form a tight seal. Tip geometries also vary between manufacturers, affecting the seal consistency and pipetting accuracy.

Universal tiip design vs. Rainin LTS comparisson

Better Ergonomics and Better Results

Accuracy requires consistency, yet consistency is difficult to maintain when a user is fatigued or in pain. Pipetting is highly repetitive and the effects of pipetting forces are cumulative.

At 0.6 kg, LTS all but eliminates tip loading/ejecting forces, so users face none of the debilitating issues one experiences when working with standard tips.



Reduce Plastic Waste

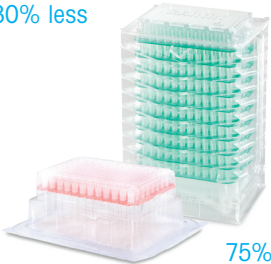
Greener Tip Rack Solutions

Rainin offers a number of waste-saving pipette tip rack and refill options to help meet your sustainability objectives, and all Genuine Rainin tips are ACT™ Ecolabel certified by My Green Lab™.

The Rainin approach to reducing plastic waste:

- Reducing the amount of plastic—particularly #5 polypropylene that, when recycled, down-cycles into lower-quality products (e.g., doormats and crates).
- Replacing polypropylene with PET, which is more widely recycled. Recycled #1 PET can be made into the same or similar products (e.g., water bottles and TerraRacks™).
- Avoiding plastic components, instead using natural, compostable materials like plant fiber.

Plastic savings shown below are calculated using our standard 1000 μ L polypropylene tip rack as the baseline and include the rack base, lid, tip deck, sleeve (refills) and any plastic wrapping—tips are not included.

Bulk Tips	EarthRack	Green-Pak
~98% less plastic 	82% less 	80% less  75% less
The most sustainable rack is the rack you do not use, which makes manually refilling racks with bulk tips is an option for some labs.	Except the tip deck, BioClean Green™ certified EarthRack™ is made entirely from compostable, rapidly renewable plant fiber.	Green-Pak™ and Green-Pak SpaceSaver™ refill systems for Rainin standard racks are both made from highly recyclable #1 PET.



Standard Racks (RT)

- Multichannel-friendly
- Removable hinged lids
- Fully autoclavable

Green-Pak™ (GP)

- Individually sealed
- Great for filter tips

Green-Pak SpaceSaver™ (GPS)

- Fast and easy to use refills
- Up to 10 refills per stack

Integrated Rack and Refill System

StableRak and StableStak

60% less



StableRak™ and StableStak™ are made of polypropylene and designed for high-production multichannel work with 192 tips per layer. .

TerraRak

50% less



TerraRak is made from #1 PET—the same plastic as in water bottles and the most recycled plastic worldwide.

Rainin Standard Rack

Baseline



Like most pipette tip racks, Rainin standard racks are 100% #5 polypropylene, which is prized for strength and durability. Designed for multichannels and fully autoclavable.

The Right Tip for Every Experiment

LTS and Universal Tips

Available in Genuine Rainin LTS and universal-fit formats, with sterile, filter, low retention, wide-orifice, extended-length, and a wide range of ACT EcoLabel certified more sustainable formats.

Sterile



Tips are sterilized by irradiation and ready for immediate use. No autoclaving necessary.

Filtered



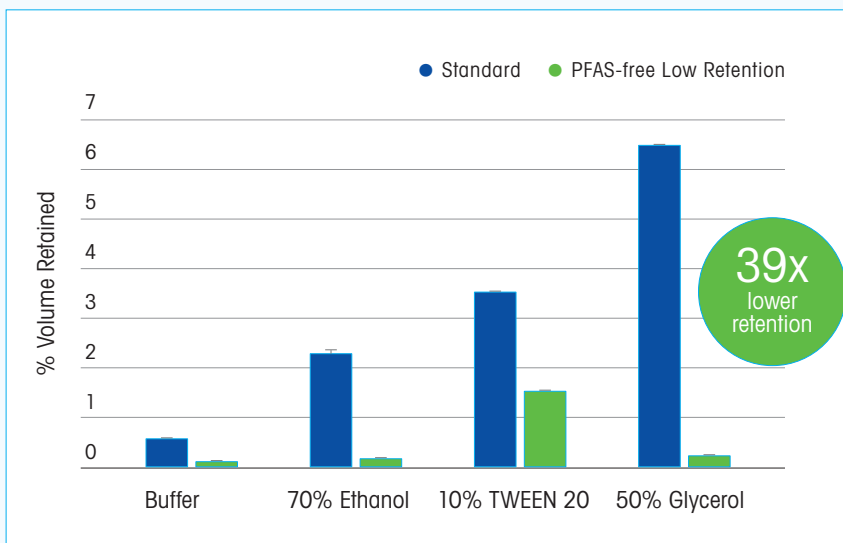
Unlike filters that inhibit enzymatic reactions, Rainin filters are made from pure virgin sintered polyethylene that prevents aerosols and liquids from entering the pipette.

Low Retention



An even, hydrophobic surface reduces sample loss and maximizes liquid ejection with precious, expensive, viscous, low surface tension, and other challenging liquids.

Achieve Accurate Results from Precious Samples



Across a range of liquids, Rainin Hydrophobic Low Retention tips retain less liquid than standard tips. Their even, hydrophobic surface maximizes liquid ejection with precious samples and challenging liquids, including glycerol, TWEEN™ 20, and ethanol. Lower liquid retention reduces sample loss and helps achieve more accurate results.

Rainin Hydrophobic Low Retention Tips

Extended-Length



Extended-length tips enable aspirating and dispensing into deep, narrow vessels, including 8 mm ID penetrable septa in specimen collection kits.

Wide-Orifice



Wide-orifice tips reduce shear forces, which protects cell viability, maintains the integrity of high molecular weight DNA, and reduces flow resistance for viscous samples.

And More...



From positive displacement tips, syringe tips for repeaters, to tips for automation systems, Rainin has a vast catalog to meet all your pipette tip needs.

Benefit From Our Liquid Handling Expertise

Scientists around the world rely on high-quality liquid handling equipment from Rainin. Our premium instruments and consumables reflect our passion for exceptional quality and innovative design. They are built to deliver years of accurate, reliable, and ergonomic operation.



Ergonomic Pipettes

Choose from a wide assortment of single-channel, multichannel, electronic, manual, and positive displacement pipettes for years of accurate results.

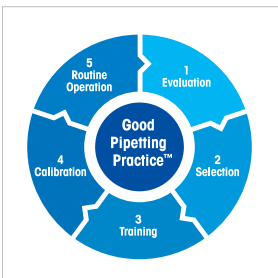
► www.mt.com/pipettes



Expert Pipette Service

The METTLER TOLEDO global network of factory trained technicians and ISO/IEC accredited pipette calibration labs ensure your instruments are restored to the highest accuracy and precision.

► www.mt.com/pipette-service



Good Pipetting Practice

Improve data quality through our comprehensive approach to maximizing pipetting accuracy and reproducibility. Find white papers, videos, webinars and more.

► www.mt.com/gpp

Rainin, Pipetting 360+, BioClean Ultra, Green-Pak, SpaceSaver, TerraRack, EarthRack, StableStak, StableRock, Pipet-Lite, XLS+ and GPP are trademarks of Mettler-Toledo Rainin, LLC. ACT and My Green Lab are trademarks of My Green Lab, Inc and TWEEN is a trademark of CRODA Americas, LLC, which have no affiliation with Mettler-Toledo Rainin.

www.mt.com/rainin

For more information

Your Partner in Precision

METTLER TOLEDO Group

Laboratory Division

Local contact: www.mt.com/contacts

Subject to technical changes.

© 08/2026 METTLER TOLEDO. All rights reserved.

31202477 Rev A