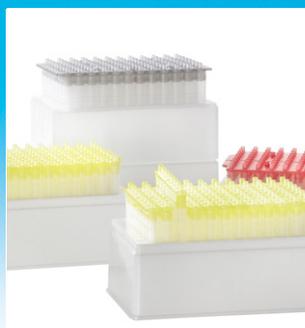# Product Catalog

2025

Ergonomic Pipettes
LTS LiteTouch System
High-Throughput Systems
BioClean Ultra Tips
Pipette Management
Good Pipetting Practice
Global Service Network

Pipettes, Tips and Service

Quality Products for Superior Performance

METTLER TOLEDO

NEW Products to Enhance Your Workflows

New
1250 µL
model

Try New MicroPro 300 µL Tips in Strips

Why Rainin?
Quality, Performance and Purity!

Professional labs around the world rely on Rainin for their liquid-handling protocols.

Whether your goal is to be first to market or first to publish, the accuracy, precision and ergonomics of your equipment can hugely help – or hinder – your success. Choose Rainin!

Quality

From rugged construction and innovative features to exceptional comfort and ergonomic design, Rainin quality is recognized worldwide.

Performance

Rainin pipettes are renowned for precision and accuracy. Rainin multichannels offer industry-leading channel-to-channel consistency.

▶ There's a reason Rainin multichannel pipettes outperform all other multichannels worldwide – exceptional comfort and handling, and industry leading channel-to-channel consistency.

Purity

BioClean Ultra is the industry's most comprehensive standard for tip purity. We test every lot and guarantee every tip for purity and performance.

Innovation

For more than 40 years, Rainin has been advancing the art of liquid handling.

Pipettes

Rainin pipettes offer exceptional performance, comfort and durability.

Tips

The Rainin LiteTouch System dramatically reduces the amount of force required to load and eject tips.

Service

We offer a global network of factory-trained technicians.

Good Pipetting Practice

Free assessment tools and onsite training to build your team's pipetting skills.

Pipette Management

Our PipetteX pipette management software puts robust pipette tracking and SOP compliance at your fingertips.

Mettler Toledo

METTLER TOLEDO is the global leader in precision instruments across many industries.

BioClean Ultra / BioClean Green

From pure virgin polypropylene and precision engineering to meticulously-clean manufacturing, Rainin tips deliver outstanding quality and performance.

The Rainin LTS LiteTouch System
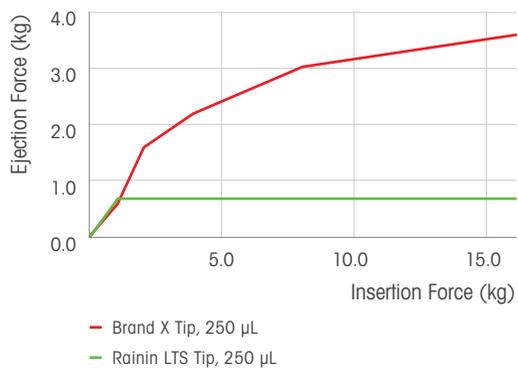## Because Pipetting Shouldn't Hurt

Rainin revolutionized pipetting with the LiteTouch™ System. LTS™ not only virtually eliminates the harmful forces associated with tip loading and ejection, but also improves experimental reproducibility by eliminating inaccuracies due to imperfect seals.

Why switch to LTS?
- Reduce your risk of pipetting-related 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

Meet LTS in 90 seconds!
▶ **mt.com/LTS-video**
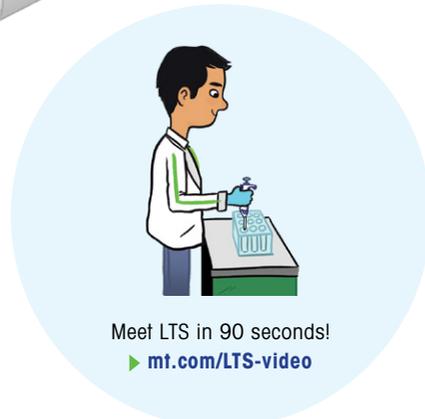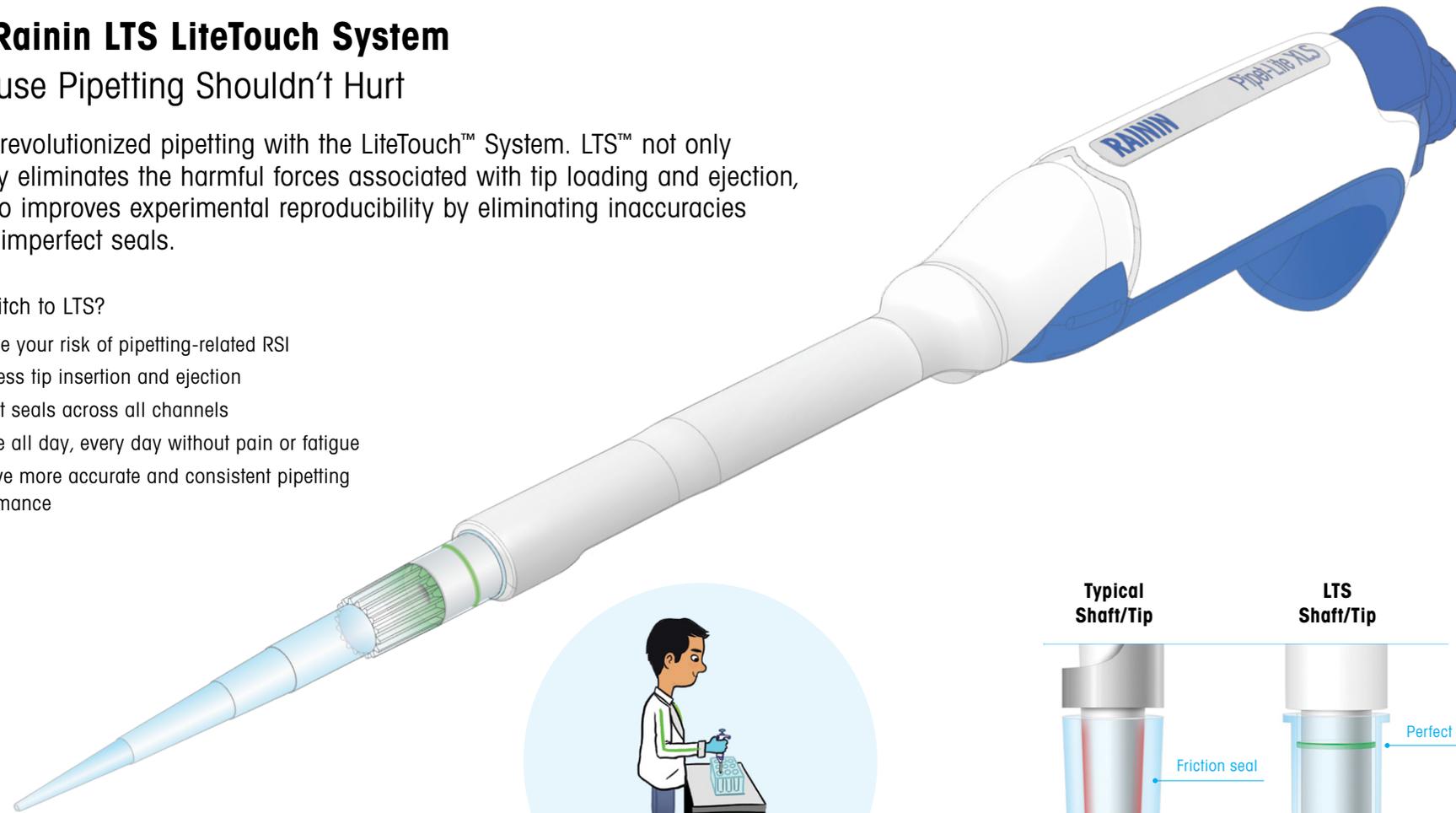
Good ergonomics = better, more consistent results

Insertion Force (kg) / Ejection Force (kg)
- Brand X Tip, 250 µL
- Rainin LTS Tip, 250 µL

Accuracy requires consistency, yet consistency is difficult to maintain when a user's hands are fatigued or in pain. Pipetting is highly repetitive and the effects of pipetting forces – jamming tips onto shafts, then struggling to eject them – are cumulative, hence the documented relationship between pipetting accuracy and the effects of pipetting forces.

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.

Typical Shaft/Tip

Friction seal

LTS Shaft/Tip

Perfect seal

Positive stop
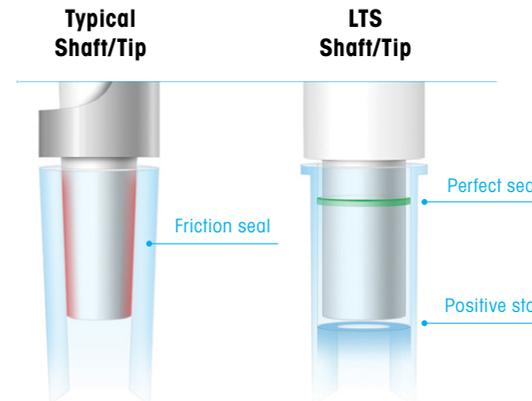
Effortless tip loading and ejection

Achieving a reliable seal with standard tips relies heavily on the strength (and persistence) of the user. Conventional pipette shaft-ends and tips are cone-shaped, so a tight seal relies on the strength of the user and pliability of the tip material. What's more, tip geometries vary from manufacturer to manufacturer, affecting the seal consistency and the accuracy of dispensed volumes.

LTS shafts and tips are cylindrical with a unique sealing ring inside the tip. Tips slide easily onto the shaft, stop when properly seated and make a perfect seal every time. Once seated, LTS tips won't fall off, yet slide off easily when pushed by the ejector.

Are you at risk?

- **Pipetting** is one of the most repetitive tasks in the laboratory.
- **More than 30%** of all workplace injuries are musculoskeletal disorders, including repetitive strain injuries and cumulative trauma disorders (injuries associated with repetition, excessive force and poor posture).
- Pipettes without LTS require up to **12 kg* of force** to complete a pipetting cycle.
- Forces should not exceed 30% of maximum average strength capacity:

3 kg For men | **2.1 kg** For women

- You are at risk if:
  – You pipette more than **an hour a day** or **300 hours a year.**
  – You use non-LTS pipettes that can require up to **12 kg* of force.**
- Prevention is the key to reducing musculoskeletal disorders and repetitive strain injuries.

*What is 12 kg of force equal to?

Driving a stake into the ground with a sledgehammer

Turning a manual can opener to open a can of food

Picking up a small child
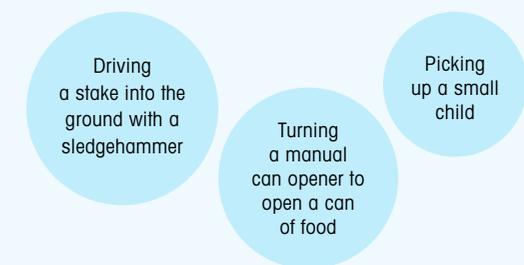
Download our pipetting ergonomics white paper
▶ **mt.com/pipetting-ergo**

Rainin Pipet-Lite XLS+
Performance You Can Feel

Rainin Pipet-Lite® XLS+ raises the bar on comfort, performance and control. Many volume sizes available in both LTS `LTS` and universal `UNV` formats.

Smooth operation

The sealing system on XLS+ pipettes delivers a plunger stroke that is smooth, precise and requires less force than before. Perfect for pipetting applications that require delicate control!

Highly accurate

Built to last and manufactured with premium quality materials, XLS+ pipettes are designed to deliver superior performance, year after year.

Autoclavable

XLS+ single-channel pipettes are designed for easy autoclaving where it counts: the complete liquid end, including the seals and piston. Autoclaving won't compromise performance or feel.

Advanced asset management

The RFID tag on board every Rainin XLS+ pipette stores calibration data that is electronically read by the Rainin SmartStand and PipetteX software. See page 71 for details.

Total comfort

With sure-fit handles, contoured fingerhooks, lighter springs and low-drag seals, you can comfortably use Pipet-Lite XLS+ pipettes all day.

Secure volume lock

The snag-proof lock design on XLS+ pipettes prevents accidental volume drift while allowing for rapid volume adjustment, even while wearing gloves.

A better tip ejector

The tip ejector is made from a high density polymer that is corrosion free, autoclavable and highly resistant to chemicals. The ejector slides off in a single easy motion for cleaning.

`UNV`

Pipet-Lite XLS+	CATALOG No.	VOLUME RANGE
	17014413	0.1–2 µL
	17014409	0.5–10 µL
	17014412	2–20 µL
	17014408	10–100 µL
	17014411	20–200 µL
	17014414	20–300 µL
	17014407	100–1000 µL
	17014410	200–2000 µL
	17011801	500–5000 µL
	17011795	1–10 mL

Universal pipettes use universal tips.
For pipette specifications, see page 22.

`LTS`

Pipet-Lite XLS+	CATALOG No.	VOLUME RANGE
	17014393	0.1–2 µL
	17014388	0.5–10 µL
	17014392	2–20 µL
	17014384	10–100 µL
	17014391	20–200 µL
	17014405	20–300 µL
	17014382	100–1000 µL
	17014390	200–2000 µL
	17011790	500–5000 µL
	17011783	1–10 mL
	17011788	2–20 mL

LTS pipettes use LTS tips.
For pipette specifications, see page 22.

You Deserve LTS
Happy Hands Yield Better Results!

Minimize fatigue and risk of repetitive strain injury (RSI) with the Rainin LTS® LiteTouch® tip ejection system.
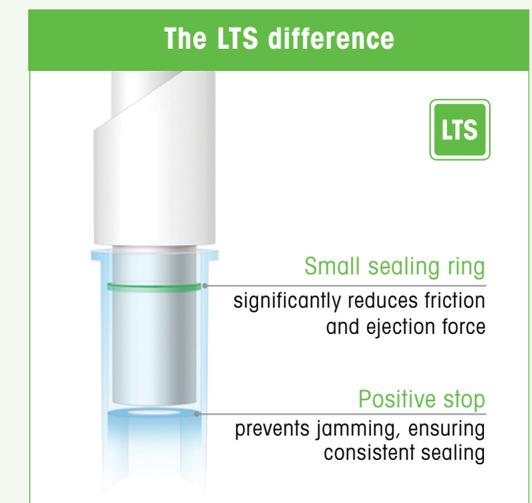
The LTS difference

`LTS`

Small sealing ring
significantly reduces friction and ejection force

Positive stop
prevents jamming, ensuring consistent sealing

The Rainin LiteTouch System dramatically reduces the amount of force required to load and eject tips. LTS pipettes work in concert with LTS tips to deliver a perfect seal every time.

- LTS tips slide easily over the shaft to create a firm, airtight fit with minimal force.

- A thin sealing ring near the top of an LTS tip virtually eliminates friction between the tip and shaft, minimizing ejection force.

- Positive stop prevents over-insertion of the tip and ensures an airtight seal.

Rainin E4 XLS+
Simple, Versatile and Secure

Our easiest to use, most richly featured and secure electronic pipette.
Many volume sizes available in both LTS [LTS] and universal [UNV] formats.

The E4 XLS+ is easily configured to be as simple or elaborate as your work requires.

- The large color screen, joystick control and graphic interface make moving between functions and operating the pipette easy and effortless.

- Highly customizable functions with multiple protocols that can be stored onboard for later use.

Your data is everything – trust the E4 XLS+ to deliver!

GLP/GMP security

Minimize deviations from your pipetting SOPs by locking protocol settings. Onboard service data is extremely secure and quick to access. Avoid calibration compliance errors by password protecting access to service interval alarms.

A "smart" charging stand!
SmartStand charges up to four E4s simultaneously and offers a simple yet sophisticated way to track and manage every XLS brand pipette in your lab. See page 69.

Performance
An advanced microprocessor-guided stepper motor has 4,000 discrete steps for extremely accurate liquid dispensing.

The app master
For serial dilutions, filling plates, pipetting unusual liquids and performing complex pipetting steps, the E4's versatile range of pipetting modes offers maximum convenience.

Save your protocols
Store multiple custom protocols in the onboard memory. Simultaneously review and select your protocols with a simple movement of the joystick. No more re-entering protocols over and over again!

Highly configurable
With E4's Admin Mode, you can configure the pipette any way you want. For convenience or security, remove unwanted modes or lock in preferred settings.

LTS

CATALOG No.	VOLUME RANGE
17014484	0.5–10 µL
17014487	2–20 µL
17014483	10–100 µL
17014486	20–200 µL
17014488	20–300 µL
17014482	100–1000 µL
17014485	200–2000 µL
17012312	500–5000 µL
17012313	1–10 mL
17012314	2–20 mL

LTS pipettes use LTS tips. Li-Ion battery and wall power supply are included. For more information about LTS, see page 9. For pipette specifications, see page 22.

UNV

CATALOG No.	VOLUME RANGE
17014491	0.5–10 µL
17014494	2–20 µL
17014490	10–100 µL
17014493	20–200 µL
17014495	20–300 µL
17014489	100–1000 µL
17014492	200–2000 µL
17012353	500–5000 µL
17012354	1–10 mL

Universal pipettes use universal tips. Li-Ion battery and wall power supply are included. For pipette specifications, see page 22.

Rainin XLS+ Multichannels
Performance You Can Feel!

8 or 12 channels; volumes from 0.5–1200 µL.
Available only in LTS. **LTS**

E4 XLS+ Electronic Multichannel

Nothing compares with the functionality, speed and accuracy of E4 XLS+

• Same functionality and ease of use as single-channel models.

• E4 does the work with Multidispense and Autopace.

• Consistent sample loading across all channels with low tip ejection forces.

LTS

CATALOG No.	VOLUME RANGE
8-Channel	
17013792	0.5–10 µL
17013793	2–20 µL
17013794	5–50 µL
17013795	20–200 µL
17013796	20–300 µL
17014498	100–1200 µL
12-Channel	
17013797	0.5–10 µL
17013798	2–20 µL
17013799	5–50 µL
17013800	20–200 µL
17013801	20–300 µL
17014499	100–1200 µL

E4 XLS+ Electronic Multichannel

LTS pipettes use LTS tips. Li-Ion battery and wall power supply are included. For more information about LTS, see page 9. For pipette specifications, see page 23.

E4 XLS+ Electronic

Pipet-Lite XLS+ Manual

Industry-leading Channel-to-Channel Consistency

There's a reason Rainin multichannel pipettes are the market leader: ease-of-use and exceptional channel-to-channel consistency.
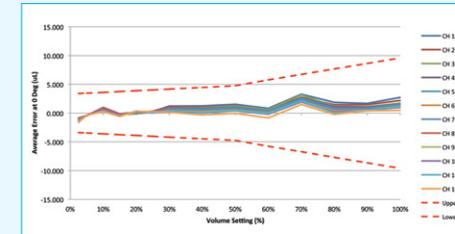
Rainin XLS+ 1200 µL

VS.
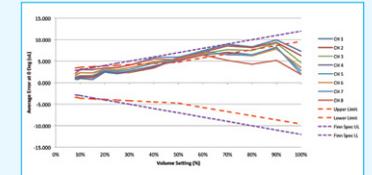
Competitor A • 1200 µL
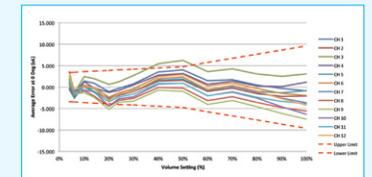
Competitor B • 1200 µL
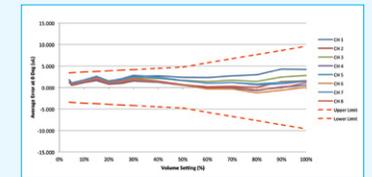
Competitor C • 1200 µL

Pipet-Lite XLS+ Manual Multichannel

Ergonomic design and exceptional performance

• Balanced, lightweight, reduced loading and ejection forces.

• Easy quick-lock volume setting – no drift

• Rugged and durable.

LTS

CATALOG No.	VOLUME RANGE
8-Channel	
17013802	0.5–10 µL
17013803	2–20 µL
17013804	5–50 µL
17013805	20–200 µL
17013806	20–300 µL
17014496	100–1200 µL
12-Channel	
17013807	0.5–10 µL
17013808	2–20 µL
17013809	5–50 µL
17013810	20–200 µL
17013811	20–300 µL
17014497	100–1200 µL

LTS pipettes use LTS tips.
For more information about LTS, see page 9.
For pipette specifications, see page 23.

Rainin Adjustable Spacer Pipettes
Tubes to Plates with Just a Twist!

Adjust from standard 9 mm spacing to 14 mm or 19 mm; manual or electronic 6- and 8-channel versions. Available only in LTS. `LTS`

Pipet-Lite XLS Adjustable Manual Multichannel
One-hand adjustable spacing.

Fast, convenient
Quickly change from format to format in a single step

Nozzle spacing ranges
6-channel: 9–19 mm
8-channel: 9–14 mm

Multiple formats
Use with 24-, 48- and 96-well plates and a variety of tube formats

Applications
Ideal for genomic, proteomic and cellular assay applications

`LTS`

	CATALOG No.	VOLUME RANGE
Pipet-Lite XLS Adjustable	**6-Channel**	
	17011841	20–300 µL
	17011840	100–1200 µL
	8-Channel	
	17011844	5–50 µL
	17011843	20–300 µL
	17011842	100–1200 µL

LTS pipettes use LTS tips.
For more information about LTS, see page 9.
For pipette specifications, see page 23.
.

E4 XLS Adjustable Electronic Multichannel
Different formats? No problem!

Easy, accurate and repeatable spacing
Just set the limiter dial and quickly move between formats by twisting the spacing control. Marks on the liquid end give fast visual confirmation of nozzle spacing. Ideal for routine micro-well work when you need to change formats quickly.

`LTS`

	CATALOG No.	VOLUME RANGE
E4 XLS Adjustable	**6-Channel**	
	17012327	20–300 µL
	17012328	100–1200 µL
	8-Channel	
	17012329	5–50 µL
	17012330	20–300 µL
	17012331	100–1200 µL

LTS pipettes use LTS tips. Li-Ion battery and wall power supply are included. For more information about LTS, see page 9. For pipette specifications, see page 23.

Rainin NanoRep
Electronic Repeater Pipette

Automatically dispense up to 1,000 aliquots
– with no contact necessary from vessel to vessel.

- Lightweight, comfortable grip
- Transfer volatile, viscous and dense liquids
- No Touch Off™ dispense
- Aliquots as low as 100 nL, with increments as low as 10 nL – down to 1/10,000th the nominal volume of any syringe tip
- Up to 1,000 aliquots from one aspiration

Conserve samples, reagents and syringe tips with up to1,000 aliqots per tip:100 μL (shown), 10 mL, 50 mL

Avoid contact contamination with No Touch Off dispense – down to 100-nanoliter aliquots

Cushioned joystick to navigate and operate

Effortless tip ejection

Enjoy crisp readability and track progress visually on clear color screen

Fingerhook allows a relaxed grip for greater comfort and control

Comfortable manual dispensing with left or right side buttons, or joystick. NanoRep also dispenses automatically at adjustable timed intervals

NanoRep syringe tips | Specifications

Tip Vol. mL	1%	Systematic Error 10%	50%	100%
0.1	1 μL ± 8% (0.080 μL)	10 μL ± 1.6% (0.16 μL)	50 μL ± 0.90% (0.45 μL)	100 μL ± 0.90% (0.90 μL)
10	100 μL ± 2% (2.0 μL)	1 mL ± 0.40% (4.0 μL)	5 mL ± 0.40% (20 μL)	10 mL ± 0.30% (30 μL)
50	500 μL ± 2% (10 μL)	5 mL ± 0.25% (12.5 μL)	25 mL ± 0.25% (62.5 μL)	50 mL ± 0.25% (125 μL)

Tip Vol. mL	1%	Random Error 10%	50%	100%
0.1	1 μL ≤ 12% (0.12 μL)	10 μL ≤ 2.5% (0.25 μL)	50 μL ≤ 0.80% (0.40 μL)	100 μL ≤ 0.50% (0.50 μL)
10	100 μL ≤ 3% (3.0 μL)	1 mL ≤ 0.35% (3.5 μL)	5 mL ≤ 0.20% (10 μL)	10 mL ≤ 0.15% (15 μL)
50	500 μL ≤ 3.5% (17.5 μL)	5 mL ≤ 0.45% (22.5 μL)	25 mL ≤ 0.20% (50 μL)	50 mL ≤ 0.10% (50 μL)

Tip Volume

mL	Min. Aliquot* μL	Min. Incr.** μL
0.1	0.1	0.01
10	10	1
50	50	5

*Min. Aliquot = Smallest dispensable volume/tip.
**Min. Increment = Lowest incremental adjustment/tip.

	CATALOG No.	DESCRIPTION
NanoRep	30568171	Electronic NanoRep repeater pipette (includes: charging cable, Hang-Up and 10 mL syringe tip)
	17012878	Wall power supply
	30584027	Hang-Ups (for pipettes with fingerhook)
	30575784	NanoRep stand

	CATALOG No.	MAX. VOLUME	QUANTITY	
NanoRep Syringe Tips	30575705	0.1 mL	100 per pkg	
	30575777	0.1 mL	25 per pkg	Sterilized
	30575707	10 mL	100 per pkg	
	30575779	10 mL	25 per pkg	Sterilized
	30575789	50 mL	25 per pkg	
	30575781	50 mL	25 per pkg	Sterilized

Rainin Classic
Timeless Design, Exceptional Performance

An economical pipette with advanced ergonomic features not found on other pipettes in its class. Available in universal UNV formats.

An economical pipette with decades of expertise built in, Rainin Classic™ will deliver years of reproducible performance. Lighter spring forces, low-drag seals and a shock absorber make it easy on your hands.

Durable

Stainless steel and high-quality PVDF materials ensure durability, fewer out-of-tolerance failures and low cost of ownership.

Lower plunger force

The Rainin Classic's plunger force is 25% less than similar pipettes.

Comfort

The fingerhook allows a lighter grip during pipetting cycles, for improved ergonomics.

Great value – lower prices!

UNV

	CATALOG No.	VOLUME RANGE
Rainin Classic	**17008648**	0.1–2 µL
	17008649	0.5–10 µL
	17008650	2–20 µL
	17008651	10–100 µL
	17008652	20–200 µL
	17008653	100–1000 µL
	17008654	500–5000 µL
	17008655	1–10 mL
Starter Kit	**17008708**	Starter kit: PR-20, PR-200, PR-1000 and accessories

Universal pipettes use universal tips.
For pipette specifications, see page 22.

Rainin Pos-D
Positive Displacement Pipetting

The right solution for liquids with high densities, viscosities or vapor pressures.

Rainin Pos-D™ positive displacement pipettes are ideal when pipetting liquids with high densities, viscosities or vapor pressures.

Relax!

The ergonomically designed Pos-D rests in your hand while you work.

Easy to load

Pre-assembled, sterilized disposable syringe tips are packed in convenient racks.

No cross contamination

Positive displacement prevents aerosol formation and protects samples from contamination.

	CATALOG No.	VOLUME RANGE	RACKS/CARTON	TIPS/CARTON	STERILIZED
Pos-D Pipettes	**17008575**	0.5–10 µL			
	17008576	3–25 µL			
	17008577	20–50 µL			
	17008578	10–100 µL			
	17008579	50–250 µL			
	17008580	100–1000 µL			
Capillaries and Pistons	**17008604**	10 µL	3	180	✓
	17008605	25 µL	3	180	✓
	17008606	50 µL	3	180	✓
	17008607	100 µL	3	180	✓
	17008608	250 µL	3	180	✓
	17008609	1000 µL	3	180	✓
	17012264	10 µL	3	180	
	17012265	25 µL	3	180	
	17012266	50 µL	3	180	
	17012267	100 µL	3	180	
	17012268	250 µL	3	180	
	17012135	1000 µL	3	180	

Pipette Starter Kits
Multiple Ways to Buy New Rainin XLS+ Pipettes!

Available with SmartStand or Hang-Ups™

Starter Kits with SmartStand include PipetteX software for easy pipette management (see page 60):

- Manage calibration and service for all of your pipettes
- View pipette calibration status right at your bench
- Quick charge your E4 XLS+ electronic pipettes
- Available for LTS LTS and universal UNV

CATALOG No.	Single Channel Manual						Multichannel Manual				Single Channel Electronic			SmartStand w/ PipetteX software	Hang-Ups
	2 µL	10 µL	20 µL	200 µL	1000 µL	5000 µL	20 µL 8-channel	200 µL 8-channel	20 µL 12-channel	200 µL 12-channel	20 µL	200 µL	1000 µL		
LTS															
30386738	✓	✓	✓	✓										✓	
30579469	✓	✓	✓	✓											✓
30386597	✓		✓	✓	✓									✓	
30579367	✓		✓	✓	✓										✓
30386599			✓	✓	✓									✓	
30386737				✓	✓	✓								✓	
30386734			✓	✓	✓		✓							✓	
30386733			✓	✓	✓			✓						✓	
30386736			✓	✓	✓				✓					✓	
30386735			✓	✓	✓					✓				✓	
30386739							✓	✓						✓	
30456871			✓	✓	✓										✓
30579472							✓	✓							✓
30386740									✓	✓				✓	
30579471									✓	✓					✓
30386731											✓	✓	✓	✓	
UNV															
30386598	✓		✓	✓	✓									✓	
30386730			✓	✓	✓									✓	
30456872			✓	✓	✓										✓
30386732											✓	✓	✓	✓	
17008708*			✓	✓	✓										✓

* Rainin Classic

SmartStand + PipetteX software = Easy Pipette Management

OR

Pipette Performance Specifications
Specifications at 10%, 50% and 100% volume

All Rainin single-channel models, including:

Manual pipettes
- Pipet-Lite XLS/XLS+
- Rainin Classic

Electronic pipettes
- E4 XLS/XLS+

Single-Channel Pipettes

PIPETTE VOLUME	VOL VOLUME	INCREMENT µL MANUAL	INCREMENT µL ELECTRONIC	SYSTEMATIC ERROR %	SYSTEMATIC ERROR (±) µL	RANDOM ERROR %	RANDOM ERROR (≤) µL
2 µL	0.2 µL	0.002	n/a	12	0.024	6.0	0.012
	1 µL			2.7	0.027	1.3	0.013
	2 µL			1.5	0.030	0.70	0.014
10 µL	1.0 µL	0.02	0.01	2.5	0.025	1.2	0.012
	5.0 µL			1.5	0.075	0.60	0.030
	10.0 µL			1.0	0.10	0.40	0.040
20 µL	2 µL	0.02	0.02	7.5	0.15	2.0	0.040
	10 µL			1.5	0.15	0.50	0.050
	20 µL			1.0	0.20	0.30	0.060
100 µL	10 µL	0.2	0.1	3.5	0.35	1.0	0.10
	50 µL			0.80	0.40	0.24	0.12
	100 µL			0.80	0.80	0.15	0.15
200 µL	20 µL	0.2	0.2	2.5	0.50	1.0	0.20
	100 µL			0.80	0.80	0.25	0.25
	200 µL			0.80	1.6	0.15	0.30
300 µL	30 µL	0.5	0.2	2.5	0.75	1.0	0.30
	150 µL			0.80	1.2	0.25	0.375
	300 µL			0.80	2.4	0.15	0.45
1000 µL	100 µL	2	1	3.0	3.0	0.60	0.60
	500 µL			0.80	4.0	0.20	1.0
	1000 µL			0.80	8.0	0.15	1.5
2000 µL	200 µL	2	2	3.0	6.0	0.60	1.2
	1000 µL			0.80	8.0	0.20	2.0
	2000 µL			0.80	16	0.12	2.4
5000 µL	500 µL	5	5	2.4	12	0.60	3.0
	2500 µL			0.60	15	0.20	5.0
	5000 µL			0.60	30	0.16	8.0
10 mL	1 mL	20	10	5.0	50	0.60	6.0
	5 mL			1.0	50	0.20	10
	10 mL			0.60	60	0.16	16
20 mL	2 mL	20	20	5.0	100	0.60	12
	10 mL			1.0	100	0.20	20
	20 mL			0.60	120	0.16	32

All Rainin multichannel models, including:

Manual pipettes
- Pipet-Lite XLS/XLS+
- Pipet-Lite XLS Adjustable Spacer

Electronic pipettes
- E4 XLS/XLS+
- E4 XLS Adjustable Spacer

Multichannel Pipettes

PIPETTE VOLUME	VOL VOLUME	INCREMENT µL MANUAL / ELECTRONIC	SYSTEMATIC ERROR %	SYSTEMATIC ERROR (±) µL	RANDOM ERROR – MANUAL %	RANDOM ERROR – MANUAL (≤) µL	RANDOM ERROR – ELECTRONIC %	RANDOM ERROR – ELECTRONIC (≤) µL
10 µL	1.0 µL	0.02/0.01	4.0	0.040	5.0	0.050	3.0	0.030
	5.0 µL		1.5	0.075	1.5	0.075	0.80	0.040
	10.0 µL		1.0	0.10	0.50	0.050	0.50	0.050
20 µL	2 µL	0.02	7.5	0.15	4.0	0.080	3.0	0.060
	10 µL		1.5	0.15	1.5	0.15	1.0	0.10
	20 µL		1.0	0.20	0.50	0.10	0.30	0.060
50 µL	5 µL	0.05	3.5	0.175	2.0	0.10	1.5	0.075
	25 µL		1.2	0.30	0.50	0.125	0.40	0.10
	50 µL		0.80	0.40	0.40	0.20	0.30	0.15
200 µL	20 µL	0.2	2.5	0.50	1.2	0.24	1.0	0.20
	100 µL		0.80	0.80	0.25	0.25	0.25	0.25
	200 µL		0.80	1.6	0.30	0.60	0.20	0.40
300 µL	30 µL	0.5/0.2	2.5	0.75	1.5	0.45	1.0	0.30
	150 µL		0.80	1.2	0.30	0.45	0.25	0.375
	300 µL		0.80	2.4	0.25	0.75	0.20	0.60
1200 µL	100 µL	2/1	3.6	3.6	1.0	1.0	0.60	0.60
	600 µL		0.80	4.8	0.30	1.8	0.20	1.2
	1200 µL		0.80	9.6	0.20	2.4	0.15	1.8

Specifications subject to change without notice.

96-Channel Pipetting
Faster, More Accurate Workflows

By making it possible to perform experiments more efficiently, accurately and reliably, 96-channel pipettors have become indispensable tools in many life science laboratories. They can significantly reduce the time and effort required to perform experiments, while providing higher accuracy and reproducibility. They are particularly useful in applications that involve large-scale screenings, such as drug discovery, ELISAs, proteomics and cell-based assays.

Unlike single- and multichannel pipettes, which are more dependent on user's technique, manual and semi-automated 96-channel pipettors are ideal for research and scale-up, and can often provide more reliable and reproducible results. They also dispense small volumes of liquid with high accuracy, which is important in many applications that require precise measurements.

Rainin offers 96-channel pipettors to meet your exact need.

- **MicroPro** – our most compact, affordable and advanced semi-automated 96-channel pipettor.
- **BenchSmart 96** – with four plate-trays, ideal for labs that do a lot of multi-plate work.
- **Liquidator 96** – perfect for researchers who want to manually control every aspect of their workflow.

	MicroPro	BenchSmart 96	Liquidator 96
96/384-Well Plate Applications	●	●	●
Interchangeable Heads	●	●	●
Suitable for BSL/PCR Cabinets	●	●	●
Small Footprint	●	●	●
Low Cost	●	●	●
Volume Range	0.5-20 µL 5-300 µL 50-1250 µL	0.5-20 µL 5-200 µL 100-1000 µL	0.5-20 µL 5-200 µL

# How can a 96-channel pipettor speed your workflow?
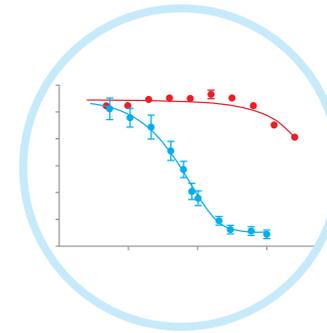
High-Throughput Screening
For various applications, such as genomic, drug screening or proteomics research, a 96-channel pipettor enables you to quickly and accurately screen large numbers of samples.
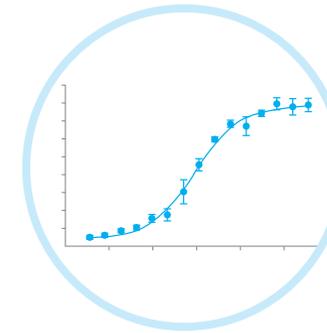
ELISA Assays
Using a 96-channel pipettor, you can simultaneously transfer the reagents to multiple wells or wash wells, significantly reducing the time and effort needed to perform an ELISA assay.
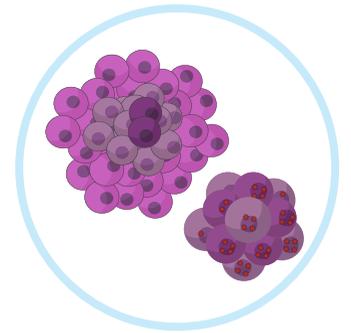
Cell-Based Assays
Perform high-throughput cell-based assays using a 96-channel pipettor to quickly transfer cells, reagents and other components to multiple wells with exceptional accuracy.
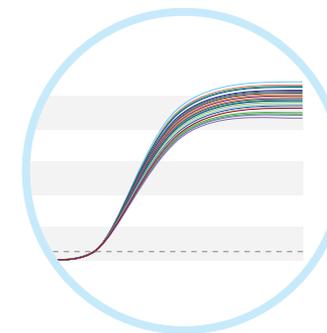
PCR/qPCR Amplification
Streamline the PCR process and increase throughput using a 96-channel pipettor to quickly and accurately transfer reagents for PCR amplification.

Plate Replication
Increasing your efficiency and reduce the chance of errors using a 96-channel pipettor to quickly and accurately transfer the contents of a mother plate to multiple daughter plates.

DNA Sequencing
A 96-channel pipettor can help researchers accomplish the many sample preparation steps often involved prior to DNA sequencing faster and with greater accuracy.

Rainin MicroPro
Affordable, Portable 96-Channel Pipetting

NEW
1250 µL model

MicroPro simplifies and streamlines 96- and 384-well microplate work, from filling plates to complex, multi-step workflows.

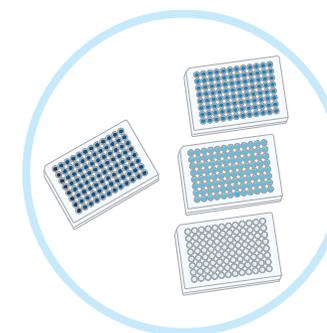**Compact, highly affordable and easy to use, the MicroPro wirelessly connects to a high resolution touchscreen for an intuitive and user-friendly experience.**

- 20 µL, 300 µL and 1250 µL models
- Weighs just around 13 pounds!
- Save/retrieve complex workflows
- Intuitive touchscreen interface
- 10x speed control

MP-20

MP-1250

MP-300

MicroPro Tips

The innovative and proprietary design of the MicroPro pipette tips and tip cartridges requires minimal force for loading all 96 tips. This significant force reduction allows MicroPro to be small and lightweight – currently the smallest benchtop on the market! MicroPro tips work with the Rainin MicroPro instrument only. They are available as low-retention tips in 20, 300 and 1250 µL volume sizes, sterilized and sterilized with filter.

Tips in Strips – **NEW** 300 µL Serial Dilution Tips

With our new MicroPro 300 µL "Tips in Strips" you can perform serial dilutions (a series of dilutions related to each other by setting a constant dilution) and protocols involving partial plate filling (replicates within the same plate) with greater ease, speed and reproducibility.

Simplify your workflows

From the touchless tip ejection and programmable Pipetting Depth Recall™ to saving complex, multistep protocols, the MicroPro boosts productivity and improves reproducibility.

Your research assistant

MicroPro goes beyond simply adding and mixing reagents by offering convenient features such as aliquot dispensing, sample dilution with mixing and multi-aspirate with mixing.

Custom protocols

Custom protocols are easy to create and allow you to build and save a tailored sequence of instruction and liquid handling steps that exactly match the needs of your protocols.

MicroPro

	CATALOG No.	MAX VOL	DESCRIPTION
MicroPro	30835029	20 µL	0.5-20 µL MicroPro 20
	30835028	300 µL	5-300 µL MicroPro 300
	30932001	1250 µL	50-1250 µL MicroPro 1250
	30835030		Two-Tray Dual Nest, MPR 96/96

Rainin BenchSmart 96
Semi-Automated 96- and 384-Well Pipetting

The precision and reproducibility of automated liquid handling with the speed and flexibility of a manual system.

The semi-automated BenchSmart™ 96 improves reproducibility by eliminating user variability when aspirating and dispensing.

- Semi-automated high-throughput 96- and 384-well plate processing for genomics, proteomics, and cellular-based assays.

- BenchSmart gives users complete and precise control over the position of the pipetting head with 96 channels.

- The four tray positions save time and reduce your risk of error by minimizing the need to swap out trays and reservoirs.

Smart high-throughput

With its large touchpad, BenchSmart makes it easy to design, save and retrieve any protocol, from simple one-step procedures to complex, multi-step experiments.

Three pipetting heads

Get the precision you demand with the 0.5-20 μL head, the lab workhorse you need with the 5-200 μL head, and the multi-dispensing capability of the 100-1000 μL head.

Save time and money

BenchSmart 96 simplifies and speeds workflows by significantly reducing, if not eliminating, the need to swap out tips and reservoirs.

Speed your workflow

Compared to a two-tray system where reservoirs and trays need to be swapped out, a two solution protocol needs fewer liquid handling steps with BenchSmart.

4-tray BenchSmart 96
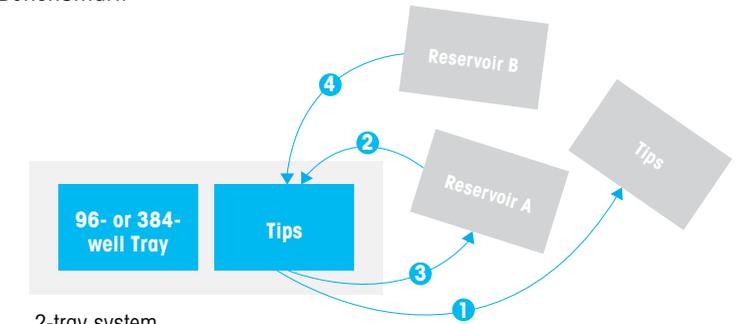
2-tray system

BenchSmart 96

	CATALOG No.	MAX VOL	DESCRIPTION
BST 96	30296705	20 μL	0.5-20 μL BenchSmart 96, complete
	30296706	200 μL	5-200 μL BenchSmart 96, complete
	30296707	1000 μL	100-1000 μL BenchSmart 96, complete
	30296708	20 μL	Pipetting head 0.5-20 μL, BenchSmart 96
	30296709	200 μL	Pipetting head 5-200 μL, BenchSmart 96
	30296780	1000 μL	Pipetting head 100-1000 μL, BenchSmart 96
Accs.	17010394	–	384-well adapter plate stage, white
	17010791	–	384-well adapter plate stage, black
	30321288	–	Terminal Conversion Kit

See page 32 for high-throughput LTS tips.
For reservoirs, plates, mats and strips, see page 31.

Rainin Liquidator 96
Manual High-Throughput Pipetting

Fully manual processing of 96- and 384-well plates for genomics, proteomics and cell-based assays.

Liquidator™ 96 streamlines application workflows for genomics, proteomics and cellular applications, simplifies plate replication, runs serial dilutions, performs plate washes or quickly moves samples between 96- and 384-well formats.

Count on Liquidator 96 to deliver the highest accuracy for PCR, qPCR, DNA sequencing and genotyping experiments. Generate precise 96-well ELISA, functional, cell viability or chemotaxis assays, all on one platform.

- Two volume ranges: 0.5-20 µL and 5-200 µL
- No power or programming: simply set the volume and pipette
- Four-position platform: process up to 3 plates at a time without stacking

Easy to use
Because Liquidator doesn't require programming or significant training, anyone can be an expert in no time.

Save time
Liquidator processes 96-well plates in as few as six seconds each, without sacrificing data quality.

Reduce errors
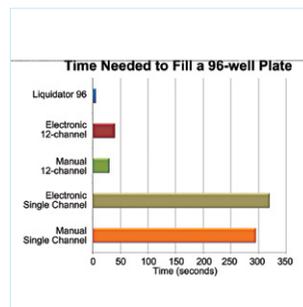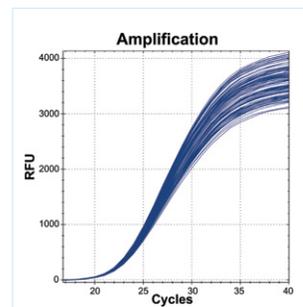By pipetting all 96 wells simultaneously, Liquidator eliminates the risk of skipping or repeating wells or rows.

Liquidator 96

	CATALOG No.	MAX VOL	DESCRIPTION
LIQ 96	17014207	20 µL	0.5-20 µL Benchtop Pipetting System
	17010335	200 µL	5-200 µL Benchtop Pipetting System

Liquidator 96 is supplied with height adjustment posts, a 384-well adapter plate stage and three racks of tips to get you started.

	CATALOG No.		DESCRIPTION
LIQ 96 Accs.	17014270	–	Height adjustment posts, 0.5-20 µL Liquidator
	17010396	–	Height adjustment posts, 5-200 µL Liquidator
	17010394	–	384-well adapter plate stage, white
	17010791	–	384-well adapter plate stage, black
	17011118	–	20 µL tip tray adapter, white

Reservoirs, plates, mats and strips

	CATALOG No.	DESCRIPTION		
Reusable SBS footprint polypropylene reservoirs	17012602	Non-sterile	Low-profile 96 pyramidal bottoms	5-pack
	17012603	Sterile	Low-profile 96 pyramidal bottoms	5-pack, ind. wrap
	17012604	Non-sterile	Standard profile 96 pyramidal bottoms	5-pack
	17012605	Sterile	Standard profile 96 pyramidal bottoms	5-pack, ind. wrap
	17012608	Non-sterile	Low-profile 8-channel V-bottom	5-pack
	17012609	Sterile	Low-profile 8-channel V-bottom	5-pack
	17012606	Non-sterile	Standard profile 8-channel V-bottom	5-pack
	17012607	Sterile	Standard profile 8-channel V-bottom	5-pack, ind. wrap
	17012612	Non-sterile	Low-profile 12-channel V-bottom	5-pack
	17012613	Sterile	Low-profile 12-channel V-bottom	5-pack, ind. wrap
	17012610	Non-sterile	Standard profile 12-channel V-bottom	5-pack
	17012611	Sterile	Standard profile 12-channel V-bottom	5-pack, ind. wrap
Deepwell plates, mats, tube strips, cap strips	17012623	Non-sterile	2.2 mL 96-deepwell plate	5-pack
	17012624	Sterile	2.2 mL 96-deepwell plate	5-pack, ind. wrap
	17012625	Non-sterile	Polymer sealing mat fits 96-deepwell plate	5-pack
	17012626	Sterile	Polymer sealing mat fits 96-deepwell plate	5-pack, ind. wrap
	17012630	Sterile	1.2 mL racked microtube strips (8x12)	box of 300

Tips for 96-Channel Platforms

High-Throughput LTS Tips

For use with BenchSmart 96 and Liquidator 96 benchtop pipettors only (1000 µL for BenchSmart only).

LTS

Tips in Racks

CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	FILTER	LOW RET
17011185	LQR LTS 20µL 960/10	20 µL	10	960			
17011186	LQR LTS 20µL S 960/10	20 µL	10	960	✓		
17011117	LQR LTS 20µL F 960/10	20 µL	10	960	✓	✓	
17010645	LQR LTS 200µL 960/10	200 µL	10	960			
17010647	LQR LTS 200µL S 960/10	200 µL	10	960	✓		
17010646	LQR LTS 200µL F 960/10	200 µL	10	960	✓	✓	
30281704	LQR LTS 1000µL 960/10	1000 µL	10	960			
30296781	LQR LTS 1000µL S 960/10	1000 µL	10	960	✓		
30296782	LQR LTS 1000µL F 960/10	1000 µL	10	960	✓	✓	
17014399	LQR LTS 20µL LS 960/10	20 µL	10	960	✓		✓
17014400	LQR LTS 20µL FL 960/10	20 µL	10	960	✓	✓	✓
17014401	LQR LTS 200µL LS 960/10	200 µL	10	960	✓		✓
17014402	LQR LTS 200µL FL 960/10	200 µL	10	960	✓	✓	✓
30296783	LQR LTS 1000µL LS 960/10	1000 µL	10	960	✓		✓
30296784	LQR LTS 1000µL FL 960/10	1000 µL	10	960	✓	✓	✓

Tips in Stacks

CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	FILTER	LOW RET
17011187	LQS LTS 20µL 960/10	20 µL	10	960			
17011287	LQS LTS 20µL S 960/10	20 µL	10	960	✓		
17010648	LQS LTS 200µL 960/10	200 µL	10	960			
17010649	LQS LTS 200µL S 960/10	200 µL	10	960	✓		
17014403	LQS LTS 20µL LS 960/10	20 µL	10	960	✓		✓
17014404	LQS LTS 200µL LS 960/10	200 µL	10	960	✓		✓

MicroPro Tips in Racks

CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	FILTER	LOW RET
63305398	MPR 20µL LS 4800/50	20 µL	50	4800	✓		✓
63305397	MPR 20µL LF 4800/50	20 µL	50	4800	✓	✓	✓
63305400	MPR 300µL LS 4800/50	300 µL	50	4800	✓		✓
63305399	MPR 300µL LF 4800/50	300 µL	50	4800	✓	✓	✓
63305538	MPR 1250µL LS 960/10	1250 µL	10	960	✓		✓
63305537	MPR 1250µL LF 960/10	1250 µL	10	960	✓	✓	✓
Tips in Strips							
63305551	MPR 300µL LS strips 960/10	300 µL	10	960	✓		✓
	MPR 300µL LF strips 960/10	300 µL	10	960	✓	✓	✓

Specifications for 96-Channel Platforms

BenchSmart 96

MODEL/MAX. VOLUME	20 µL	200 µL	1000 µL
HEAD SIZE	LOW VOLUME 0.5 – 20 µL	MID VOLUME 5 – 200 µL	HIGH VOLUME 100 – 1000 µL
Systematic Error (per channel)	20 µL: ± 1.0% (0.20 µL) 10 µL: ± 1.2% (0.12 µL) 2 µL: ± 6.0% (0.12 µL) 1 µL: ± 12% (0.12 µL)	200 µL: ± 1.0% (2.0 µL) 100 µL: ± 1.0% (1.0 µL) 20 µL: ± 2.0% (0.40 µL) 5 µL: ± 5.0% (0.25 µL)	1000 µL: ± 1.0% (10 µL) 500 µL: ± 1.0% (5.0 µL) 100 µL: ± 2.5% (2.5 µL)
Random Error (per channel)	20 µL: ≤ 0.80% (0.16 µL) 10 µL: ≤ 1.0% (0.10 µL) 2 µL: ≤ 5.0% (0.10 µL) 1 µL: ≤ 10% (0.10 µL)	200 µL: ≤ 0.40% (0.80 µL) 100 µL: ≤ 0.80% (0.80 µL) 20 µL: ≤ 1.5% (0.30 µL) 5 µL: ≤ 3.5% (0.175 µL)	1000 µL: ≤ 0.40% (4.0 µL) 500 µL: ≤ 0.40% (2.0 µL) 100 µL: ≤ 1.25% (1.25 µL)
Volume Increments	0.02 µL	0.2 µL	1 µL

Liquidator 96

MODEL/MAX. VOLUME	20 µL	200 µL
VOLUME RANGE	2 – 20 µL	5 – 200 µL
Systematic Error (per channel)	20 µL: ± 1.0% (0.20 µL) 10 µL: ± 1.2% (0.12 µL) 2 µL: ± 6.0% (0.12 µL) 1 µL: ± 12% (0.12 µL)	200 µL: ± 1.0% (2.0 µL) 100 µL: ± 1.0% (1.0 µL) 20 µL: ± 2.0% (0.40 µL) 5 µL: ± 5.0% (0.25 µL)
Random Error (per channel)	20 µL: ≤ 0.80% (0.16 µL) 10 µL: ≤ 1.0% (0.10 µL) 2 µL: ≤ 5.0% (0.10 µL) 1 µL: ≤ 10% (0.12 µL)	200 µL: ≤ 0.50% (1.00 µL) 100 µL: ≤ 0.80% (0.80 µL) 20 µL: ≤ 1.5% (0.30 µL) 5 µL: ≤ 3.5% (0.175 µL)
Volume Increments	0.02 µL	0.2 µL

MicroPro

MODEL/MAX. VOLUME	20 µL	300 µL	1250 µL
VOLUME RANGE	2 – 20 µL	5 – 300 µL	50 – 1250 µL
Systematic Error (per channel)	20 µL: ± 1.0% (0.20 µL) 10 µL: ± 1.5% (0.15 µL) 2 µL: ± 5.0% (0.10 µL)	300 µL: ± 1.0% (3.0 µL) 150 µL: ± 1.5% (2.25 µL) 30 µL: ± 1.5% (0.45 µL) 15 µL: ± 2.0% (0.30 µL)	1250 µL: ± 1.8% (22.5 µL) 625 µL: ± 2.0% (12.5 µL) 125 µL: ± 2.5% (3.13 µL)
Random Error (per channel)	20 µL: ≤ 0.5% (0.10 µL) 10 µL: ≤ 1.0% (0.10 µL) 2 µL: ≤ 3.0% (0.060 µL)	300 µL: ≤ 1.0% (3.0 µL) 150 µL: ≤ 1.0% (1.50 µL) 30 µL: ≤ 1.0% (0.30 µL) 15 µL: ≤ 2.0% (0.30 µL)	1250 µL: ≤ 0.8% (10.0 µL) 625 µL: ≤ 1.0% (6.25 µL) 125 µL: ≤ 1.5% (1.88 µL)
Volume Increments	0.01 µL	0.1 µL	1 µL

Rainin SP and SP+ Pipette Controllers
Easy Control at Your Fingertips

Superior ergonomics, state-of-the-art technology and a unique, extendable head to conquer your larger volume liquid handling needs with speed and ease.

Extendable head (SP+)

Telescoping head for added comfort, particularly when operating in a laminar flow hood.

Variable speed, low force

Easily adjustable aspiration/dispense speeds offer greater flexibility with various solutions and media, and protection for sensitive cells.

Lightweight, easy to use

The ergonomic and well-balanced design makes the instrument easy to hold and operate.

Powerful battery

Delivers 15 hours of operation on single charge and up to one hour after just 10 minutes.

Wide range of consumables

Rainin SP+ works with all types of 1 mL to 100 mL serological and micro pipettes and can transfer liquid from 0.1 mL to 100 mL.

Magnetic Hang-Up™ connection point

Aspiration/dispense control buttons

SP+

SP

Specific Applications

- Cell culture
- Bacteria and yeast culture
- Sample prep (DNA/RNA/ protein extraction)

Environment

- On the bench
- In the biosafety – and chemical-hood

Liquid Transfer

- Buffer
- Chemicals
- Media

Aspiration cone assembly

Telescoping head

Battery status indicator

Support frame attachment grooves

Dispense speed control

Aspiration speed control

CATALOG No.	DESCRIPTION	
SP+	30671415	Rainin SP+ pipette controller, 0.1–100 mL
SP	30671413	Rainin SP pipette controller, 0.1–100 mL (China)
	30671414	Rainin SP pipette controller, 0.1–100 mL
	Model availability varries by region.	

▶ **mt.com/Rainin-SPplus**

CATALOG No.	DESCRIPTION	
Accs.	30621244	Filter, non-sterilized
	30695285	Filter, sterilized
	30671310	Magnetic Hang-Up
	30621247	Pipette adaptor

Rainin QuickFlow
Portable Easy-to-Use Aspirator

Smart features

- Variable speed settings
- Non-contact liquid level sensor
- 4L waste reservoir with carry handle
- Quick-snap connectors and tubing
- Autoclavable bottle and cap
- Fits in most hoods
- Single channel, 8-channel and serological adapters

Guaranteed safety

The robust, non-contact liquid level sensor prevents overflows with auto-stop, a flashing light and audible alarm when the reservoir is full. Simple, self-sealing snap connectors keep the contents and any contamination inside the bottle.

CATALOG No.	DESCRIPTION
30519826	**QuickFlow System – UNV** Includes variable speed vacuum system, 4L autoclavable reservoir with inlet/outlet snap connector cap, non-contact liquid level sensor system for reservoir, inlet and outlet vacuum tubing with snap connectors and complete handle kit.
30551530	**QuickFlow System – LTS** Includes variable speed vacuum system, 4L autoclavable reservoir with inlet/outlet snap connector cap, non-contact liquid level sensor system for reservoir, inlet and outlet vacuum tubing with snap connectors and complete handle kit.
30519824	**QuickFlow Handle Kit – UNV** Standard UNV kit includes ergonomic handle with continuous and non-continuous flow control, three adaptors (8-channel/universal tip, single- channel/universal tip, single Pasteur pipette), vacuum tubing and handle hook accessory.
30551534	**QuickFlow Handle Kit – LTS** LTS kit includes ergonomic handle with continuous and non-continuous flow control, three adaptors (8-channel/universal tip, single- channel/universal tip, single Pasteur pipette), vacuum tubing and handle hook accessory.

▶ **mt.com/QuickFlow**

Upgrade Your Liquid Aspiration – It's Easy!
The Rainin QuickFlow Handle Kit – with three adapters – attaches easily to your central vacuum system

Single channel adapter
Wide range of Rainin universal-fit tips to suit your application.

Serological adapter
Fits standard glass or plastic Pasteur pipettes

Continuous flow option
Switch suction on to reduce finger strain

8-channel adapter

No-clog design
Unique channel design prevents blockage and delivers long-lasting performance.

Upgrade your system
QuickFlow handle and tubing attaches easily to your vacuum system.

Hand-saving ergonomic design
Convenient, low-force tip ejection with one hand.

Easy cleaning
The QuickFlow handle, adapters and tube is easy to clean and autoclavable.

Rainin AutoRep S
Manual Repeater Pipette

Flexible volume ranges and a wide selection of syringes ensure precise performance.

The ergonomic AutoRep™ S manual repeater pipette is simple to operate, lightweight and easy on the hands.

Useful when working in the aliquot range from 2 µL to 5 mL, AutoRep S is an economical choice for repeat dispensing up to 49 aliquots without refilling.

The wide selection of Encode™ syringes in sizes from 0.1 mL to 50 mL is available in sterile and non-sterile.

	CATALOG No.	DESCRIPTION		
AutoRep S	17013008	Manual repeater pipette volume range: 2 µL to 5 mL		
	17013009	Shelf mount		
	17013010	Volume table		

	CATALOG No.	MAX. VOLUME	QUANTITY	
	17007399	0.1 mL	100 per pkg	
	17007400	0.1 mL	100 per pkg	Sterile
	17001871	0.5 mL	100 per pkg	
	17001872	0.5 mL	100 per pkg	Sterile
	17013004	1 mL	100 per pkg	
	17013002	1 mL	100 per pkg	Sterile
	17001873	1.25 mL	100 per pkg	
	17001874	1.25 mL	100 per pkg	Sterile
Encode Syringes	17001877	2.5 mL	100 per pkg	
	17001878	2.5 mL	100 per pkg	Sterile
	17001883	5 mL	100 per pkg	
	17001884	5 mL	100 per pkg	Sterile
	17013005	10 mL	100 per pkg	
	17013003	10 mL	100 per pkg	Sterile
	17001875	12.5 mL	100 per pkg	
	17001876	12.5 mL	100 per pkg	Sterile
	17001879	25 mL*	50 per pkg	
	17001880	25 mL*	25 per pkg	Sterile
	17001881	50 mL*	25 per pkg	
	17001882	50 mL*	25 per pkg	Sterile

* Includes one adapter. For complete syringe offering, please visit mt.com/rainin

Rainin Disp-X
Large Volume Bottle Top Dispensing

Built-in safety features prevent spills and ensure smooth, trouble-free operation.

Superior chemical compatibility
High-grade inert materials ensure the purity of your reagents from the first aliquot to the last.

Safety first!
Discharge tube and closure cap prevent accidental dispensing or spilling of corrosive liquids.

Clear and easy control
Adjustable control knob facilitates volume setting.

Flexible options
Telescoping filling tubes accommodate different size bottles.

	CATALOG No.	DESCRIPTION		
Disp-X	30373527	Disp-X 0.5–5 mL bottle-top dispenser		
	30373528	Disp-X 1–10 mL bottle-top dispenser		
	30373529	Disp-X 2.5–25 mL bottle-top dispenser		
	30373750	Disp-X 5–50 mL bottle-top dispenser		
Accessories	30373751	Disp-X discharge tube	5 or 10 mL	
	30373752	Disp-X discharge tube	25 or 50 mL	
	30373753	Disp-X filling tube	5 or 10 mL	125–240 mm length
	30373754	Disp-X filling tube	5 or 10 mL	250–480 mm length
	30373755	Disp-X filling tube	25 or 50 mL	170–330 mm length
	30373756	Disp-X filling tube	25 or 50 mL	250–480 mm length
	30373757	Disp-X filling valve	5 or 10 mL	
	30373758	Disp-X filling valve	25 or 50 mL	
	30373759	Disp-X discharge valve	5 or 10 mL	
	30373760	Disp-X discharge valve	25 or 50 mL	

Pipette Performance Matters
Trust METTLER TOLEDO to Deliver

Your work is too important to risk inaccurate or inconsistent data due to poor pipette performance. Pipette service by METTLER TOLEDO is rigorous and comprehensive, executed by highly trained and experienced technicians who know your pipettes. Make certain these important research tools deliver the reliability and reproducibility your work depends on – with METTLER TOLEDO Service.

Reliable pipette service is part of the Rainin 360+™ system for optimal liquid handling results. Precision pipettes, high-purity tips and expert service are all backed by innovative tools, software and training to ensure exceptional performance across your workflows.

With secure, global measurement standards and the world's largest service team, only METTLER TOLEDO offers the depth, breadth and level of process integrity and control your pipettes demand.

360 +

Largest Service Team

We have built the world's largest pipette service organization – including the largest network of ISO 17025-accredited service labs and onsite service teams – to ensure consistent, reliable service performance in over 40 countries.

Factory-Trained Technicians

Every pipette calibration technician is factory trained and equipped with state-of-the-art METTLER TOLEDO balances to assure accurate gravimetric measurements and provide a thorough and reliable pipette service experience.

Global Data Governance

Our proprietary Global Pipette Service Solution – GPSS – securely records measurement data directly from the balance to eliminate any potential for recording inaccurate results. Adhering to a single, global standard, it also links directly to PipetteX for electronic calibration certificate delivery. 24 CFR Part 11 compliant.

GPSS
Global Pipette Service Solution

OEM Parts & Specifications

Maintenance and repairs are performed according to every major pipette manufacturer's specifications – from OEM parts to the recommended greases – to ensure that your instruments continue to perform with precision and accuracy.

Plans to Meet Your Needs

Whether you prefer onsite or mail-in service, we offer a wide range of service plans. With fast turnaround and the capacity to meet any laboratory's need – including ISO 8655 calibration service – METTLER TOLEDO has the capacity and expertise to meet your exacting needs.

Your Pipette Service Partner

We offer an experienced team of service professionals who can help you determine which calibration intervals and interim pipette verification tests best suit your needs and workflows.

RaininService
Guaranteed Quality

When it comes to calibration services, one size does not fit all –
so we offer a variety of service plans.

Mail-in

- Convenient mail-in service
- ISO 17025 accredited
- Tight temperature, humidity, vibration controls
- 6- and 7- place METTLER TOLEDO balances
- METTLER TOLEDO MCP multichannel balances

Onsite*

- Perfect for labs with chain-of-custody concerns
- ISO 17025 accredited
- METTLER TOLEDO balances
- Minimal downtime
- Pipettes are calibrated in the environment where they are used
- METTLER TOLEDO onsite technicians

* Not available in all countries

Service Plans

All plans include:
- Full preventive maintenance (PM) with seal replacement or restoration
- Liquid leak test on all nozzles
- Adjustment to manufacturer's tolerances
- Calibration certificate with detailed results
- Calibration label

	Standard	Advanced	Accredited	Accredited+ ISO-7	Accredited+ ISO-6
	Labs with basic service needs	When prior performance matters	Complete ISO 17025 documentation	ISO 8655-7 and 17025 compliance	ISO 8655-6 and 17025 compliance
	Perfect for Academic R&D Research Labs	Pharma Biotech Clinical Research Labs	GLP/GMP, Regulated Labs	GLP/GMP, Regulated Labs	GLP/GMP, Regulated Labs
As Found	N/A	4 Test weighings @ 10, 100%	4 Test weighings @ 10, 50, 100%	10 Test weighings @ 10, 50, 100%	10 Test weighings @ 10, 50, 100%
As Returned	4 Test weighings @ 10, 100%	4 Test weighings @ 10, 100%	10 Test weighings @ 10, 50, 100%	10 Test weighings @ 10, 50, 100%	10 Test weighings @ 10, 50, 100%
Preventive Maintenance	Yes	Yes	Yes	Yes	Yes
Calibration Certificate	Non-accredited	Non-accredited	Accredited	Accredited	Accredited
Compliance	SOPs based on ISO 8655	SOPs based on ISO 8655	SOPs based on ISO 8655	ISO 8655:2022 part 7 modified gravimetric method	ISO 8655:2022 part 6 reference gravimetric method

Good Pipetting Practice
Better Results Through Better Understanding

The performance of any instrument is improved in the hands of a skilled operator. Through GPP™, labs can reduce errors and improve the reliability and repeatability of their results. The key: better understanding the factors that affect experiments and learning application-specific techniques.

You can improve data quality with Good Pipetting Practice™ – METTLER TOLEDO's comprehensive, systematic approach to maximizing pipetting accuracy and repeatability.

Routine operation
Learn how to care for pipettes every day and how to set up the right schedule for calibration and routine testing to ensure optimal pipette performance.

Evaluation
Evaluate the variables, tolerances and other requirements of your pipettes.

Calibration
Recognize the risks associated with out-of-calibration pipettes and know how preventive maintenance ensures pipetting performance over time.

Selection
Maximize your potential to produce accurate and reproducible data by selecting the right tools for a specific application.

Training
Optimize workflows and improve outcomes with application-specific pipetting techniques. Also, learn how to minimize pipetting discomfort and injury through better ergonomics.
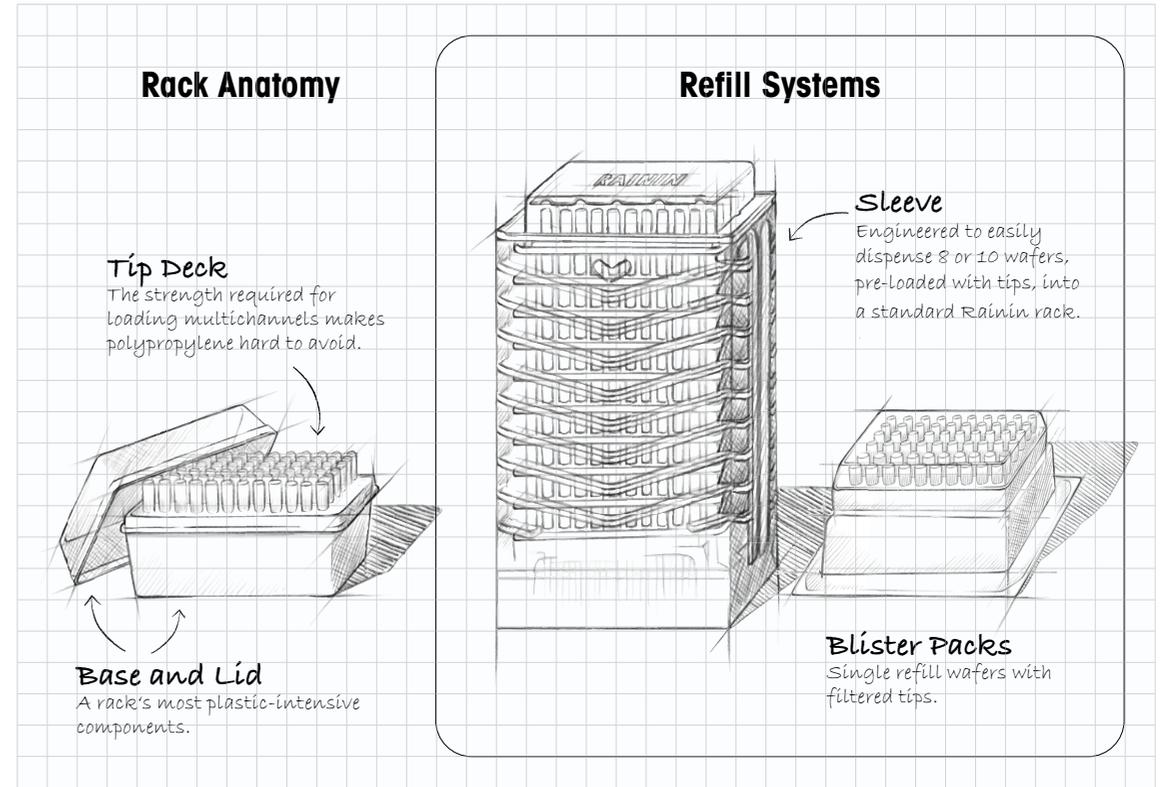
Reduce Plastic Waste with Rainin
Greener Tip Rack Solutions

Rainin offers a number of waste-saving pipette tip rack options to help meet your sustainability objectives. We've taken a three-pronged approach to reducing plastic rack waste:

- Reducing the amount of plastic – particularly #5 polypropylene that, when recycled, downcycles into lower-quality products (e.g., doormats, crates, etc.).

- Replacing polypropylene with PET, which is more widely recycled. Recycled #1 PET can be made into the same or similar products (water bottles, TerraRacks, etc.).

- Avoiding plastic components, instead using natural, compostable materials like plant fiber.

Plastic savings shown below are calculated using our current standard 1000 µL polypropylene tip rack as the baseline. Components used for the calculation include the rack base, lid, tip deck, sleeve (refills) and any plastic wrapping – tips are not included. Actual plastic savings percentages vary slightly by rack size (10 µL racks are smaller than 1000 µL racks). Our current standard rack, which we introduced in 2018, uses 20% less polypropylene than the rack it replaced, so the amount of plastic saved shown below is on top of the already-reduced plastic rack.

Rack Anatomy

Tip Deck
The strength required for loading multichannels makes polypropylene hard to avoid.

Base and Lid
A rack's most plastic-intensive components.

Refill Systems

Sleeve
Engineered to easily dispense 8 or 10 wafers, pre-loaded with tips, into a standard Rainin rack.

Blister Packs
Single refill wafers with filtered tips.

~98% less plastic

82% less

80% less

75% less

Bulk Tips
The most sustainable rack is the rack you don't use, which makes manually refilling spent racks and wafers with BioClean Ultra tips in bulk a reasonable option for some labs. See page 53.

EarthRack
EarthRack eliminates plastic waste almost entirely. Other than the thin polypropylene tip deck, EarthRack is made entirely from compostable, rapidly renewable plant fiber. EarthRack uses up to 82% less plastic than the Rainin standard rack. See page 46.

Green-Pak
Green-Pak and Green-Pak SpaceSaver refill systems for Rainin standard racks reduce plastic waste by up to 80%. Green-Pak's SpaceSaver sleeve and Green-Pak sealed refill packs are both made from highly recyclable PET. See page 50.

60% less

50% less

Baseline

StableStak
Rainin StableStak multilayer system is designed for high-production multichannel work. With five layers mounted on a sturdy base and 192 tips per layer, each StableStak is equivalent to 10 96-tip racks. See page 52.

TerraRack
Not only composed of 50% less plastic than the Rainin standard rack, TerraRack is made almost entirely from PET – the same plastic as in water bottles and the most commonly recycled plastic worldwide. Easy to disassemble and compress, TerraRacks take up considerably less volume as waste. See page 48.

Rainin Standard Rack
Like most pipette tip racks, Rainin standard racks are 100% polypropylene (#5), which is prized for strength and durability. This rack was reengineered in 2018 to reduce the amount of polypropylene it contains by 20%. See page 54.

Rainin EarthRack

Compostable, Biodegradable Tip Rack

EarthRack is made primarily from refined cellulose that is easy to compost and is biodegradable. Because the small, recyclable polypropylene tip deck is the only plastic component, EarthRack significantly reduces plastic use and waste.

Available in 20 µL, 200 µL and 1000 µL.

Rainin LTS LiteTouch System only. **LTS**

Scan the QR code for a timelapse video of EarthRack biodegrading.

Earth friendly

EarthRack's lid and base are composed of a biodegradable bamboo and sugar cane cellulose material that can be composted at municipal facilities. If deposited in a landfill, they will biodegrade.

Reduces plastic waste

With up to 75% less plastic than conventional racks, adopting EarthRack can help organizations meet their sustainability objectives.

Less carbon

When composted, incinerated or deposited into a landfill, EarthRack's cellulose components contribute no net increase in atmospheric CO_2. Carbon absorbed during initial plant growth is simply returned to the atmosphere.

Specifications

BioClean Green Test Limits of Detection (LODs)	
Human DNA	<0.32 pg
Bacterial DNA	<0.032 pg
Plant (chloroplast) DNA	<0.032 pg
DNase (three tests)	
• Gel electrophoresis	$\leq 10^{-7}$ KU/µL
• Kunitz Assay	$\leq 10^{-4}$ KU/µL
• qPCR	$\leq 10^{-5}$ KU/µL
RNase (three tests)	
• Gel electrophoresis	$\leq 10^{-5}$ KU/µL
• Kunitz Assay	$\leq 10^{-5}$ KU/µL
• RT-qPCR	$\leq 10^{-5}$ KU/µL
Endotoxin (LPS)	≤ 0.01 EU/mL
Protein	<2 ng/tip
Protease	<500 ng/mL
PCR inhibitors	None detected

EarthRack is BioClean Green™

Rainin EarthRack products are certified to be BioClean Green – a comprehensive testing process and specifications developed specifically for cellulose-based tip racks.

Because EarthRack is derived from natural, plant-based materials, BioClean Green employs a broader, more intrusive quality testing procedure to ensure the absence of biological contaminants. For example, the use of cellulose requires an additional test for chloroplast DNA. Testing for DNase and RNase has been expanded to include three separate tests for each nuclease for complete assurance of tip performance.

		CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	FILTER
LTS	EarthRack	30807966	ER LTS 20µL F 960G/10	20 µL	10	960	✓	✓
		30807967	ER LTS 200µL F 960G/10	200 µL	10	960	✓	✓
		30808038	ER LTS 1000µL F 768G/8	1000 µL	8	768	✓	✓

BioClean Ultra Pipette Tips

BioClean Ultra™

TerraRack
The Most Eco-Friendly Rack Around

Less weight, less waste, 100% recyclable

TerraRack™ is a revolutionary concept in tip racks. Sturdy as conventional racks, yet made with less than half the plastic of standard racks and completely recyclable. In fact, the hinged TerraRack shell is made from PET, which is easily recycled.

For convenience and complete cleanliness, TerraRacks with BioClean Ultra tips come sterilized (they are not autoclavable).

Many volume sizes available in both LTS LTS and universal UNV formats.

ACT. Certified

Less waste

With 50% less plastic than conventional racks, TerraRacks are also extremely compressible, so racks occupy significantly less space in a waste or storage container.

100% recyclable

In addition to being completely recyclable, much of each TerraRack is composed of PET, which is easily recycled and aggressively recovered from the plastic waste stream.

Non slip accessory

Each TerraBase provides secure footing on slippery bench surfaces for an enhanced pipetting experience. Durable construction provides high-impact resistance.

	CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	SHAFTGARD	FILTER
LTS **TerraRack**	17014960	TR LTS 20µL S 960A/10	20 µL¹	10	960	✓		
	17014961	TR LTS 20µL F 960A/10	20 µL¹	10	960	✓		✓
	17014962	TR LTS 250µL S 960A/10	200 µL²	10	960	✓		
	17014963	TR LTS 200µL F 960A/10	200 µL²	10	960	✓		✓
	17014964	TR LTS 300µL S 768A/8	300 µL	8	768	✓		
	17014965	TR LTS 300µL F 768A/8	300 µL	8	768	✓		✓
	17014966	TR LTS 1000µL S 768A/8	1000 µL	8	768	✓		
	17014967	TR LTS 1000µL F 768A/8	1000 µL	8	768	✓		✓
	17014968	TR LTS 1200µL S 768A/8	1200 µL	8	768	✓		
	17014969	TR LTS 1200µL F 768A/8	1200 µL	8	768	✓		✓
UNV **TerraRack**	17014970	TR UNV 10µL S 960A/10	10 µL	10	960	✓		
	17014971	TR UNV 10µL F 960A/10	10 µL	10	960	✓		✓
	17014972	TR UNV 10µL GS 960A/10	10 µL	10	960	✓	✓	
	17014973	TR UNV 10µL GF 960A/10	10 µL	10	960	✓	✓	✓
	17014974	TR UNV 20µL F 960A/10	20 µL	10	960	✓		✓
	17014975	TR UNV 100µL F 960A/10	100 µL	10	960	✓		✓
	17014977	TR UNV 200µL F 960A/10	200 µL	10	960	✓		✓
	17014976	TR UNV 250µL S 960A/10	250 µL	10	960	✓		
	17014978	TR UNV 300µL S 768A/8	300 µL	8	768	✓		
	17014979	TR UNV 300µL F 768A/8	300 µL	8	768	✓		✓
	17014980	TR UNV 1000µL S 768A/8	1000 µL	8	768	✓		
	17014981	TR UNV 1000µL F 768A/8	1000 µL	8	768	✓		✓

TerraBase	TerraBase Accessory for TerraRack	
	17014982	TerraRack Base - short; 1 base to fit 10 - 300 µL TerraRack racks
	17014983	TerraRack Base - tall; 1 base to fit 1000/1200 µL TerraRack racks

¹ Fits 2, 10 and 20 µL pipettes ² Fits 50, 100 and 200 µL pipettes

BioClean **Ultra**™

Eco-Friendly Refills
Less Waste, More Space

Space-saving rack refill options enhance your workflow and minimize plastic waste. Order empty racks if you don't already have them. Many volume sizes available in both LTS `LTS` and universal `UNV` formats.

ACT. Certified

ACT. Certified

Fast
Refill a rack in seconds

Clean
Protects tips from contamination

Convenient
Dispensing sleeve is easy to use

Green-Pak®
Individually sealed refills – ideal for filter tip users

	CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	SHAFTGARD	FILTER
LTS	30389270	GP LTS 20µL 960A/10	20 µL¹	10	960			
	30389275	GP LTS 20µL S 960A/10	20 µL¹	10	960	✓		
	30389274	GP LTS 20µL F 960A/10	20 µL¹	10	960	✓		✓
	30389277	GP LTS 250µL 960A/10	200 µL²	10	960			
	30389278	GP LTS 250µL S 960A/10	200 µL²	10	960	✓		
	30389276	GP LTS 200µL F 960A/10	200 µL²	10	960	✓		✓
	30389271	GP LTS 1000µL 768A/8	1000 µL	8	768			
	30389273	GP LTS 1000µL S 768A/8	1000 µL	8	768	✓		
	30389272	GP LTS 1000µL F 768A/8	1000 µL	8	768	✓		✓
UNV	30389258	GP UNV 10µL 960A/10	10 µL	10	960			
	30389265	GP UNV 10µL S 960A/10	10 µL	10	960	✓		
	30389263	GP UNV 10µL F 960A/10	10 µL	10	960	✓		✓
	30389264	GP UNV 10µL FG 960A/10	10 µL	10	960	✓	✓	✓
	30389267	GP UNV 20µL F 960A/10	20 µL	10	960	✓		✓
	30389262	GP UNV 100µL F 960A/10	100 µL	10	960	✓		✓
	30389266	GP UNV 200µL F 960A/10	200 µL	10	960	✓		✓
	30389268	GP UNV 250µL 960A/10	250 µL	10	960			
	30389269	GP UNV 250µL S 960A/10	250 µL	10	960	✓		
	30389259	GP UNV 1000µL 768A/8	1000 µL	8	768			
	30389261	GP UNV 1000µL S 768A/8	1000 µL	8	768	✓		
	30389260	GP UNV 1000µL F 768A/8	1000 µL	8	768	✓		✓

Green-Pak SpaceSaver®
Each sleeve contains 8 or 10 refills

	CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	SHAFTGARD	FILTER
LTS (SpaceSaver)	30389291	GPS LTS 20µL 960A/10	20 µL¹	10	960			
	30389297	GPS LTS 20µL S 960A/10	20 µL¹	10	960	✓		
	30389299	GPS LTS 250µL 960A/10	200 µL²	10	960			
	30389301	GPS LTS 250µL S 960A/10	200 µL²	10	960	✓		
	30389303	GPS LTS 300µL 768A/8	300 µL	8	768			
	30389304	GPS LTS 300µL S 768A/8	300 µL	8	768	✓		
	30389292	GPS LTS 1000µL 768A/8	1000 µL	8	768			
	30389294	GPS-LTS 1000µL S 768A/8	1000 µL	8	768	✓		
Empty Racks	30389354	Tip Racks GPR LTS 20µL 0/10	20 µL	10				
	30389353	Tip Racks GPR XXX 250µL 0/10	200 µL	10				
	30397667	Tip Racks GPR XXX 300µL 0/8	300 µL	8				
	30389351	Tip Racks GPR XXX 1000µL 0/8	1000 µL	8				
UNV (SpaceSaver)	30389283	GPS UNV 10µL G 960A/10	10 µL	10	960		✓	
	30389285	GPS UNV 10µL GS 960A/10	10 µL	10	960	✓	✓	
	30389287	GPS UNV 250µL 960A/10	250 µL	10	960			
	30389289	GPS UNV 250µL S 960A/10	250 µL	10	960	✓		
	30397665	GPS UNV 300µL 768A/8	300 µL	8	768			
	30397666	GPS UNV 300µL S 768A/8	300 µL	8	768	✓		
	30389279	GPS UNV 1000µL 768A/8	1000 µL	8	768			
	30389281	GPS UNV 1000µL S 768A/8	1000 µL	8	768	✓		
Empty Racks	30389350	Tip Racks GPR UNV 10µL 0/10	10 µL	10				
	30389353	Tip Racks GPR XXX 250µL 0/10	250 µL	10				
	30397667	Tip Racks GPR XXX 300µL 0/8	300 µL	8				
	30389351	Tip Racks GPR XXX 1000µL 0/8	1000 µL	8				

¹ Fits 2, 10 and 20 µL pipettes   ² Fits 50, 100 and 200 µL pipettes

BioClean Ultra™

Double-96 Racked Tips
StableRak and StableStak

Ideal for high production environments. Perfect for multichannel pipetting! Available in both LTS **LTS** and universal **UNV** formats.

StableRak and StableStak are available in standard, sterilized and filter (StableRak only) formats. They keep the tips safe from debris, dust and contamination. Their sturdy construction using non-slip racks allows fast and easy loading.

StableRak™
Individual double-96 racks with 192 tips per layer.

StableStak™
Stacked double-96 racks with 192 tips per layer.

	CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	FILTER	SHAFTGARD	WIDE-O
	17005862	SR LTS 20µL 960A/5	20 µL[1]	5	960				
	17005861	SR LTS 20µL S 960A/5	20 µL[1]	5	960	✓			
	17005860	SR LTS 20µL F 960A/5	20 µL[1]	5	960	✓	✓		
	17005864	SR LTS 250µL 960A/5	200 µL[2]	5	960				
	17005863	SR LTS 250µL S 960A/5	200 µL[2]	5	960	✓			
StableRak	**17005859**	SR LTS 200µL F 960A/5	200 µL[2]	5	960	✓	✓		
	17005867	SR LTS 300µL 768A/4	300 µL	4	768				
	17005866	SR LTS 300µL S 768A/4	300 µL	4	768	✓			
	17005865	SR LTS 300µL F 768A/4	300 µL	4	768	✓	✓		
	17007083	SR LTS 1000µL 768A/4	1000 µL	4	768				
	17007082	SR LTS 1000µL S 768A/4	1000 µL	4	768	✓			
	17007081	SR LTS 1000µL F 768A/4	1000 µL	4	768	✓	✓		
	17007086	SR LTS 1200µL 768A/4	1200 µL	4	768				
	17007085	SR LTS 1200µL S 768A/4	1200 µL	4	768	✓			
	17007084	SR LTS 1200µL F 768A/4	1200 µL	4	768	✓	✓		
	17005873	SS LTS 20µL 960A/5	20 µL[1]	5	960				
	17005872	SS LTS 20µL S 960A/5	20 µL[1]	5	960	✓			
	17005875	SS LTS 250µL 960A/5	200 µL[2]	5	960				
StableStak	**17005874**	SS LTS 250µL S 960A/5	200 µL[2]	5	960	✓			
	17005877	SS LTS 300µL 768A/4	300 µL	4	768				
	17005876	SS LTS 300µL S 768A/4	300 µL	4	768	✓			
	17007090	SS LTS 1000µL 768A/4	1000 µL	4	768				
	17007089	SS LTS 1000µL S 768A/4	1000 µL	4	768	✓			
UNV	**17005857**	SR UNV 300µL 768/4	300 µL	4	768				

Bulk Tips
The Economic Solution

Ideal for academia and other research laboratories. Available in both LTS **LTS** and universal **UNV** formats.

	CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	FILTER	SHAFTGARD	WIDE-O
	17001128	RC LTS 20µL 1000A/1	20 µL[1]		1000				
	17001118	RC LTS 250µL 1000A/1	200 µL[2]		1000				
	17001132	RC LTS 300µL 1000A/1	300 µL		1000				
	17001129	RC LTS 1000µL 1000A/1	1000 µL		1000				
Bulk Tips	**17006324**	RC LTS 1200µL 1000A/1	1200 µL		1000				
	17001130	RC LTS 2000µL 1000A/1	2000 µL		1000				
	17001133	RC LTS 5000µL 1000A/1	5000 µL		1000				
	17001119	RC LTS 10mL 200A/1	10 mL		200				
	17005940*	RC LTS 10mL S 75A/*	10 mL		75	✓			
	17001131	RC LTS 20mL 100A/1	20 mL		100				
	17005941*	RC LTS 20mL S 50A/*	20 mL		50	✓			
	17001124	RC UNV 10µL 1000A/10	10 µL		1000				
	17001123	RC UNV 10µL G 1000A/10	10 µL		1000			✓	
	17001116	RC UNV 250µL 1000A/1	250 µL		1000				
	17001127	RC UNV 250µL W 1000A/1	250 µL		1000				✓
Bulk Tips	**17001121**	RC UNV 1000µL 1000A/1	1000 µL		1000				
	17001125	RC UNV 2000µL 1000A/1	2000 µL		1000				
	17001126	RC UNV 2500µL 1000A/1	2500 µL		1000				
	17001117	RC UNV 5000µL 1000A/1	5000 µL		1000				
	17001122	RC UNV 10mL 200A/1	10 mL		200				
	17005939*	RC UNV 10mL S 75A/*	10 mL		75	✓			

* Individually wrapped   Wide-O = Wide Orifice   [1] Fits 2, 10 and 20 µL pipettes   [2] Fits 50, 100 and 200 µL pipettes

Racked Tips
SBS Standard Tip Packaging

Removable-cover Racks

Removable-cover racks – easy, practical, convenient packaging. Many volume sizes available in both LTS `LTS` and universal `UNV` formats.

- 20% less plastic than the original RT rack!
- Locking latch
- Removable hinged lid
- BioClean Ultra-certified
- Use with Green-Pak and SpaceSaver refills
- Available with Low Retention tips (see page 56)

Fast loading
Robust secure racks make tip loading easy

Autoclavable
15 psi, 121°C, 20 minutes

Format options
Standard, sterilized and filter versions available

Protective
Safe from dirt and contamination

LTS — Racked Tips

CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	SHAFTGARD	WIDE-O	FILTER
30389200	RT LTS 20µL 960A/10	20 µL[1]	10	960				
30389228	RT LTS 20µL S 960A/10	20 µL[1]	10	960	✓			
30389225	RT LTS 20µL F 960A/10	20 µL[1]	10	960	✓			✓
30389243	RT LTS 250µL 960A/10	200 µL[2]	10	960				
30389247	RT LTS 250µL W 960A/10	200 µL[2]	10	960			✓	
30389245	RT LTS 250µL S 960A/10	200 µL[2]	10	960	✓			
30389249	RT LTS 250µL SW 960A/10	200 µL[2]	10	960	✓		✓	
30389239	RT LTS 200µL F 960A/10	200 µL[2]	10	960	✓			✓
30389253	RT LTS 300µL 768A/8	300 µL	10	768				
30389255	RT LTS 300µL S 768A/8	300 µL	8	768	✓			
30389254	RT LTS 300µL F 768A/8	300 µL	8	768	✓			✓
30389211	RT LTS 1000µL 768A/8	1000 µL	8	768				
30389217	RT LTS 1000µL W 768A/8	1000 µL	8	768			✓	
30389215	RT LTS 1000µL S 768A/8	1000 µL	8	768	✓			
30389220	RT LTS 1000µL SW 768A/8	1000 µL	8	768	✓		✓	
30389212	RT LTS 1000µL F 768A/8	1000 µL	8	768	✓			✓
30389230	RT LTS 1200µL 768A/8	1200 µL	8	768				
30389234	RT LTS 1200µL S 768A/8	1200 µL	8	768	✓			
30389231	RT LTS 1200µL F 768A/8	1200 µL	8	768	✓			✓
30389236	RT LTS 2000µL 480A/8	2000 µL	8	480				
30389238	RT LTS 2000µL S 480A/8	2000 µL	8	480	✓			
30389237	RT LTS 2000µL F 480A/8	2000 µL	8	480	✓			✓
30389256	RT LTS 5000µL 192A/8	5000 µL	8	192				
30389257	RT LTS 5000µL S 192A/8	5000 µL	8	192	✓			

[1] Fits 2, 10 and 20 µL pipettes

[2] Fits 50, 100 and 200 µL pipettes

UNV — Racked Tips

CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	SHAFTGARD	WIDE-O	FILTER
30389163	RT UNV 10µL 960A/10	10 µL	10	960				
30389174	RT UNV 10µL G 960A/10	10 µL	10	960		✓		
30389178	RT UNV 10µL GS 960A/10	10 µL	10	960	✓	✓		
30389181	RT UNV 10µL S 960A/10	10 µL	10	960	✓			
30389172	RT UNV 10µL F 960A/10	10 µL	10	960	✓			✓
30389175	RT UNV 10µL FG 960A/10	10 µL	10	960	✓	✓		✓
30389189	RT UNV 20µL F 960A/10	20 µL	10	960	✓			✓
30389170	RT UNV 100µL F 960A/10	100 µL	10	960	✓			✓
30389186	RT UNV 200µL F 960A/10	200 µL	10	960	✓			✓
30389191	RT UNV 250µL 960A/10	250 µL	10	960				
30389195	RT UNV 250µL W 960A/10	250 µL	10	960			✓	
30389193	RT UNV 250µL S 960A/10	250 µL	10	960	✓			
30389058	RT UNV 300µL 768A/8	300 µL	10	768				
30389059	RT UNV 300µL S 768A/8	300 µL	10	768	✓			
30389136	RT UNV 300µL F 768A/8	300 µL	8	768	✓			✓
30389164	RT UNV 1000µL 768A/8	1000 µL	8	768				
30389168	RT UNV 1000µL S 768A/8	1000 µL	8	768	✓			
30389165	RT UNV 1000µL F 768A/8	1000 µL	8	768	✓			✓
30389183	RT UNV 2000µL 480A/8	2000 µL	8	480				
30389185	RT UNV 2000µL S 480A/8	2000 µL	8	480	✓			
30389184	RT UNV 2000µL F 480A/8	2000 µL	8	480	✓			✓
30389198	RT UNV 5000µL 192A/8	5000 µL	8	192				
30389199	RT UNV 5000µL S 192A/8	5000 µL	8	192	✓			

BioClean Ultra

Low Retention Tips
Stop Wasting Valuable Sample!

Superhydrophobic Rainin LR low retention tips minimize residual volume, particularly when transferring viscous samples and liquids with low surface tension. A great option for pipetting valuable molecular biology reagents and expensive samples.

Available in both LTS **LTS** and universal **UNV** formats.

[1] Fits 2, 10 and 20 µL pipettes

[2] Fits 50, 100 and 200 µL pipettes

	CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	WIDE-O	LOW RET	FILTER
Racked Tips	30389227	RT LTS 20µL L 960A/10	20 µL[1]	10	960			✓	
	30389229	RT LTS 20µL LS 960A/10	20 µL[1]	10	960	✓		✓	
	30389226	RT LTS 20µL FL 960A/10	20 µL[1]	10	960	✓		✓	✓
	30389244	RT LTS 250µL L 960A/10	200 µL[2]	10	960			✓	
	30389248	RT LTS 250µL LW 960A/10	200 µL[2]	10	960		✓	✓	
	30389246	RT LTS 250µL LS 960A/10	200 µL[2]	10	960	✓		✓	
	30389250	RT LTS 250µL LSW 960A/10	200 µL[2]	10	960	✓	✓	✓	
	30389240	RT LTS 200µL FL 960A/10	200 µL[2]	10	960	✓		✓	✓
	30389241	RT LTS 200µL FLW 960A/10	200 µL[2]	10	960	✓	✓	✓	✓
	30389160	RT LTS 300µL L 768A/8	300 µL	8	768			✓	
	30389161	RT LTS 300µL LS 768A/8	300 µL	8	768	✓		✓	
	30389162	RT LTS 300µL FL 768A/8	300 µL	8	768	✓		✓	✓
	30389214	RT LTS 1000µL L 768A/8	1000 µL	8	768			✓	
	30389216	RT LTS 1000µL LS 768A/8	1000 µL	8	768	✓		✓	
	30389213	RT LTS 1000µL FL 768A/8	1000 µL	8	768	✓		✓	✓
	30389219	RT LTS 1000µL LW 768A/8	1000 µL	8	768		✓	✓	
	30389221	RT LTS 1000µL LSW 768A/8	1000 µL	8	768	✓	✓	✓	
	30389218	RT LTS 1000µL FLW 768A/8	1000 µL	8	768	✓	✓	✓	✓
	30389233	RT LTS 1200µL L 768A/8	1200 µL	8	768			✓	
	30389235	RT LTS 1200µL LS 768A/8	1200 µL	8	768	✓		✓	
	30389232	RT LTS 1200µL FL 768A/8	1200 µL	8	768	✓		✓	✓
SpaceSaver	30389296	GPS LTS 20µL L 960A/10	20 µL[1]	10	960			✓	
	30389298	GPS LTS 20µL LS 960A/10	20 µL[1]	10	960	✓		✓	
	30389300	GPS LTS 250µL L 960A/10	200 µL[2]	10	960			✓	
	30389302	GPS LTS 250µL LS 960A/10	200 µL[2]	10	960	✓		✓	
	30398985	GPS LTS 300µL LS 768A/8	300 µL	8	768	✓		✓	
	30389293	GPS LTS 1000µL L 768A/8	1000 µL	8	768			✓	
	30389295	GPS LTS 1000µL LS 768A/8	1000 µL	8	768	✓		✓	
Bulk	17014340	RC LTS 20µL L 1000A/1	20 µL		1000			✓	
	17014341	RC LTS 250µL L 1000A/1	200 µL		1000			✓	
	17014342	RC LTS 1000µL L 1000A/1	1000 µL		1000			✓	

Rack base not included with SpaceSaver.

UNV

	CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	SHAFTGARD	WIDE-O	LOW RET	FILTER
Racked Tips	30389180	RT UNV 10µL L 960A/10	10 µL	10	960				✓	
	30389182	RT UNV 10µL LS 960A/10	10 µL	10	960	✓			✓	
	30389173	RT UNV 10µL FL 960A/10	10 µL	10	960	✓			✓	✓
	30389177	RT UNV 10µL GL 960A/10	10 µL	10	960		✓		✓	
	30389179	RT UNV 10µL GLS 960A/10	10 µL	10	960	✓	✓		✓	
	30389176	RT UNV 10µL FGL 960A/10	10 µL	10	960	✓	✓		✓	✓
	30389190	RT UNV 20µL FL 960A/10	20 µL	10	960	✓			✓	✓
	30389171	RT UNV 100µL FL 960A/10	100 µL	10	960	✓			✓	✓
	30389187	RT UNV 200µL FL 960A/10	200 µL	10	960	✓			✓	✓
	30389188	RT UNV 200µL FLW 960A/10	200 µL	10	960	✓		✓	✓	✓
	30389192	RT UNV 250µL L 960A/10	250 µL	10	960				✓	
	30389196	RT UNV 250µL LW 960A/10	250 µL	10	960			✓	✓	
	30389194	RT UNV 250µL LS 960A/10	250 µL	10	960	✓			✓	
	30389197	RT UNV 250µL LSW 960A/10	250 µL	10	960	✓		✓	✓	
	30389137	RT UNV 300µL L 768A/8	300 µL	8	768				✓	
	30389138	RT UNV 300µL LS 768A/8	300 µL	8	768	✓			✓	
	30389139	RT UNV 300µL FL 768A/8	300 µL	8	768	✓			✓	✓
	30389167	RT UNV 1000µL L 768A/8	1000 µL	8	768				✓	
	30389169	RT UNV 1000µL LS 768A/8	1000 µL	8	768	✓			✓	
	30389166	RT UNV 1000µL FL 768A/8	1000 µL	8	768	✓			✓	✓
SpaceSaver	30389284	GPS UNV 10µL GL 960A/10	10 µL	10	960		✓		✓	
	30389286	GPS UNV 10µL GLS 960A/10	10 µL	10	960	✓	✓		✓	
	30389288	GPS UNV 250µL L 960A/10	250 µL	10	960				✓	
	30389290	GPS UNV 250µL LS 960A/10	250 µL	10	960	✓			✓	
	30389280	GPS UNV 1000µL L 768A/8	1000 µL	8	768				✓	
	30389282	GPS UNV 1000µL LS 768A/8	1000 µL	8	768	✓			✓	
Bulk	17014395	RC UNV 10µL L 1000A/1	10 µL		1000				✓	
	17014396	RC UNV 10µL GL 1000A/1	10 µL		1000		✓		✓	
	17014397	RC UNV 250µL L 1000A/1	250 µL		1000				✓	
	17014398	RC UNV 1000µL L 1000A/1	1000 µL		1000				✓	
	17015068	RC UNV 1000µL LW 1000A/1	1000 µL		1000			✓	✓	

Rack base not included with SpaceSaver.

BioClean Ultra™

Specialty Tips
Unique Tips for Special Applications

LTS

Extended-length tips
For tall, narrow tube work.
BioClean Ultra.

102 mm long
Rainin extended-length LTS tips
reach to the bottom of blocks, tall
vials, flasks, 100 mm tubes, etc.

Narrow diameter
These tips will pass through 8 mm
ID penetrable septa, such as on
specimen collection kits.

LTS

UNV

Wide-orifice tips
Ideal for delicate samples.
BioClean Ultra.

For samples with mammalian cells
or high-molecular-weight DNA.
1.5 mm wide orifice minimizes
shear forces on delicate samples
and flow resistance for viscous
samples. 200 and 1000 µL.

UNV

ShaftGard™ 10 µL tips
Avoid cross-contamination.
BioClean Ultra.

Tip protects shaft, tip ejector
Shaft and tip ejector are protected
from contamination, reducing the
need to decontaminate or sterilize
the shaft and tip ejector when
working with biological, radioactive
or other critical samples.

LTS

			VOL	QTY		FEATURES				
	CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	WIDE-O	LOW RET	FILTER	X-LENGTH
Racked Tips	30389251	RT LTS 250µL X 768A/8	200 µL²	8	768					✓
	30389252	RT LTS 250µL SX 768A/8	200 µL²	8	768	✓				✓
	30389242	RT LTS 200µL FX 768A/8	200 µL²	8	768	✓			✓	✓
	30389222	RT LTS 1000µL X 768A/8	1000 µL	8	768					✓
	30389224	RT LTS 1000µL SX 768A/8	1000 µL	8	768	✓				✓
	30389223	RT LTS 1000µL FX 768A/8	1000 µL	8	768	✓			✓	✓
	30389247	RT LTS 250µL W 960A/10	200 µL²	10	960		✓			
	30389248	RT LTS 250µL LW 960A/10	200 µL²	10	960		✓	✓		
	30389249	RT LTS 250µL SW 960A/10	200 µL²	10	960	✓	✓			
	30389250	RT LTS 250µL LSW 960A/10	200 µL²	10	960	✓	✓	✓		
	30389241	RT LTS 200µL FLW 960A/10	200 µL	10	960	✓	✓	✓	✓	
	30389217	RT LTS 1000µL W 768A/8	1000 µL	8	768		✓			
	30389219	RT LTS 1000µL LW 768A/8	1000 µL	8	768		✓	✓		
	30389220	RT LTS 1000µL SW 768A/8	1000 µL	8	768	✓	✓			
	30389221	RT LTS 1000µL LSW 768A/8	1000 µL	8	768	✓	✓	✓		
	30389218	RT LTS 1000µL FLW 768A/8	1000 µL	8	768	✓	✓	✓	✓	

² Fits 50, 100 and 200 µL pipettes

UNV

			VOL	QTY		FEATURES				
	CATALOG No.	DESCRIPTION	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	SHAFTGARD	WIDE-O	LOW RET	FILTER
Racked Tips	30389174	RT UNV 10µL G 960A/10	10 µL	10	960		✓			
	30389178	RT UNV 10µL GS 960A/10	10 µL	10	960	✓	✓			
	30389175	RT UNV 10µL FG 960A/10	10 µL	10	960	✓	✓			✓
	30389195	RT UNV 250µL W 960A/10	250 µL	10	960			✓		
	30389196	RT UNV 250µL LW 960A/10	250 µL	10	960			✓	✓	
	30389197	RT UNV 250µL LSW 960A/10	250 µL	10	960	✓		✓	✓	
	30389188	RT UNV 200µL FLW 960A/10	250 µL	10	960	✓		✓	✓	✓
Bulk	17001127	RC UNV 250µL W 1000A/1	250 µL		1000			✓		
	17015068	RC UNV 1000µL LW 1000A/1	1000 µL		1000			✓	✓	
Refills	30389283*	GPS UNV 10µL G 960A/10	10 µL	10	960		✓			
	30389285*	GPS UNV 10µL GS 960A/10	10 µL	10	960	✓	✓			
	30389264	GP UNV 10µL FG 960A/10	10 µL	10	960	✓	✓			✓

Wide-O = Wide Orifice, Low Ret = Low Retention   *Green-Pak SpaceSaver

BioClean Ultra™

The Highest Standard for Tip Purity and Performance

Rainin continuously tests and certifies its BioClean Ultra™ pipette tip products. Researchers can have absolute confidence in the integrity of their experiments and the fidelity of their data.

CERTIFICATE
OF QUALITY

Rainin BioClean™ Ultra pipette tips labeled "Certified RNase-, DNase-, Endotoxin-, Protein-, Protease- and ATP-free" have been process-tested and passed the following detection levels using the test protocols below.

Contaminants Tested	Testing Detection Levels	Contaminants Tested	Testing Detection Levels
RNase	≤ 10⁻⁹ Kunitz units/µL	ATP	< 2 X 10⁻¹² mg/µL
DNase	≤ 10⁻⁷ Kunitz units/µL	Protein	< 2 ng/lane (no visible band)
Human DNA	< 0.32 pg	Protease	≤ 500 ng/mL
Bacterial DNA	< 1 pg	PCR Inhibitors	None detected
Endotoxin	≤ 0.001 EU/mL		

CERTIFIED BY **David Greenwood, Ph.D.**
Head of Quality Systems

Tested and Certified Purity

- The industry's most comprehensive testing procedures.
- The only tips certified to be both protein- and protease-free.
- Virgin polypropylene – completely inert, with no bioactive components.

Clean Manufacturing and Packaging

- Manufactured under Class 100,000 clean room conditions.
- Fully automated material handling – zero human contact.
- Strict conformance to ISO 9001 eliminates all external sources of contamination.

Why BioClean Ultra?

This table shows the thoroughness and completeness of Rainin BioClean Ultra quality testing, compared to other major tip brands. Rainin maintains the industry's most comprehensive testing procedures.

	HUMAN DNA	BACTERIAL DNA	DNASE	RNASE	ENDOTOXIN	PROTEIN	PROTEASE	ATP	PCR INHIBITORS
BioClean Ultra™	< 0.32 pg	< 1 pg	≤ 10⁻⁷ KU/µL	≤ 10⁻⁹ KU/µL	≤ 0.001 EU/mL	< 2 ng/sample	≤ 500 ng/mL	< 2 x 10⁻¹² mg/µL	None detected
Brand – A	"Free of"	–	10⁻⁵ KU/µL	10⁻⁹ KU/µL	≤ 0.05 EU/mL	–	–	–	–
Brand – B	< 0.40 fg	–	–	< 8.6 fg	< 1 pg	–	–	< 1 fg	–
Brand – C	< 2 pg	< 50 fg	10⁻⁴ KU	10⁻⁹ KU	< 0.001 EU/mL	<1ng/µL	–	< 5.5 x 10⁻¹² mg	< 10 targets amplifiable
Brand – D	None detected	–	None detected	None detected	< 0.06 EU/mL	–	–	–	None detected
Brand – E	< 1 pg	–	"Free of"	"Free of"	< 0.05 EU/mL	–	"Free of"	"ATP-free"	–
Brand – F	"Free of"	"Free of"	"Free of"	"Free of"	"Free of"	–	"Free of"	"ATP-free"	"Free of"
Brand – G	–	–	< 6.25 x 10⁻⁵ U/µL	< 3.125 x 10⁻⁹ U/µL	< 0.03 EU/mL	–	–	–	–
Brand – H	< 30 pg	–	<10x⁻⁷ KU/µL	< 10⁻⁹ KU/µL	< 0.06 EU/mL	–	–	–	–
Brand – I	< 30 pg	–	<10⁻⁷ KU/µL	< 10⁻⁹ KU/µL	≤ 0.06 EU/mL	–	–	< 10⁻¹³ mg/µL	None detected
Brand – J	"Free of"	"Free of"	"Free of"	"Free of"	"Free of"	–	–	–	–

KU Kunitz Units **EU** Endotoxin Units **ng** nanogram (Factor: 10⁻⁹) **pg** picogram (Factor: 10⁻¹²) **fg** femtogram (Factor: 10⁻¹⁵)
"Non detected", "Free of" and **"... Free"** designations apparently indicate no observed contamination. No specifications or test methodology provided.
"–" no data available.

UV/VIS Spectroscopy
Designed for the Life Sciences

The UV5Bio and UV5Nano Excellence instruments optimize spectroscopic workflows in life sciences. FastTrack™ technology enables speedy and reliable measurements and LockPath™ technology ensures accurate micro-volume measurements.

UV5Bio
– the Life Science Expert

The UV5Bio is the ideal instrument for life science cuvette-based UV/VIS applications. Pre-programmed DNA, RNA, and protein applications are available as direct measurement routines or ready-to-use METTLER TOLEDO methods for an instant start. The OneClick™ touchscreen interface provides intuitive and efficient shortcut operation.

UV5Nano
– the Micro Master

Measure uL volumes of precious DNA, RNA or protein samples in wide concentration ranges on the micro-volume platform. The additional cuvette measurement option doubles the application power. LockPath technology ensures exact and repeatable pathlength adjustment. No need for sample dilution – just pipette and measure.

CuveT Thermostat for Precise Temperature Control

Life science UV/VIS applications such as DNA analyses, kinetics or protein dynamics require reproducible and accurate temperature conditions.

CuveT controls the temperature of samples in a 10 mm cuvette within a temperature range of 4°C to 95°C in 10 mm cuvettes.
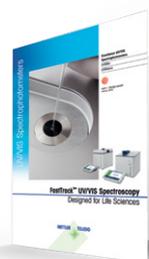
▶ Order our UV/VIS Excellence brochure. **www.mt.com/UV-VIS**

PART No.	DESCRIPTION	UV5BIO 30254728	UV5NANO 30254729
FastTrack™ Technology	Pulsed Xenon flash lamp, CCD array detector	•	•
LockPath™ Technology	Automatic pathlength adjustment		•
Optical performance	Wavelength range [nm]	190–1,100	190–1,100
	Wavelength resolution (toluene in hexane abs.)	>1.5	>1.7
	Wavelength accuracy (holmium oxide) [nm]	±1.0	±1.0
	Photometric accuracy (potassium dichromate) [A]	±0.01	±0.01
	Stray light at 198 nm (potassium chloride) [A]	>2	>1.7
One Click™ UV/VIS Spectroscopy	Shortcuts per user	24	24
Automation	Peristaltic pump FillPalMini	•	•
	InMotion™ sample changer	•	•
Applications & Methods	Direct measurement types	4	3
	METTLER TOLEDO methods	•	•
	Method editor	•	•
	Bio-direct measurement applications	•	•
	Kinetics	•	•
	Micro-volume direct measurement applications		•
	Temperature Control	•	
	Colors: Tristimulus, CIE Lab, CIE Luv, Lab according to Hunter, Chromaticity, Yellowness Index, APHA, Pt-CO, Hazen, Gardner, Saybolt, Hess-Ives, EBC, ASBC	•	•
PC Software	LabX® UV/VIS software	•	•
Languages	English, German, French, Spanish, Italian, Chinese, Russian, Portuguese		
Connectivity	USB memory stick storage (reports (pdf), data (csv), methods)	•	•
	USB devices (bar-code reader, compact printer, fingerprint reader)	•	•
	Ethernet (PC, network printer (HP PCL 3, Epson protocol), reports (pdf), data (csv))	•	•

Avoid Errors with LockPath

LockPath ensures that the available pathlengths at 0.1 mm and 1 mm are accurately defined. Thanks to the rugged design, pathlength drift is excluded to eliminate expensive re-calibration.

Compact Modularity

In the UV7, UV5 and UV5Bio, cuvette holders, CuvetteChanger, and CuveT thermostating units are positioned in the easily accessible open sample area without compromising the instrument's footprint.

Secure Measurement Quality

Good UV/VIS Practice™(GUVP™) provides comprehensive installation and qualification services that cover the entire lifecycle of the instrument. Quality is improved while risks and costs are reduced.

▶ **www.mt.com/GUVP**

SevenExcellence
Precise and Secure Instruments

SevenExcellence™ stands for convenient, user-friendly operation, combined with high measurement accuracy and outstanding flexibility. With its capacitive touchscreen and large 7 inch display and 10 available languages, operation is truly intuitive. The instrument can effectively cope with complex applications and stringent requirements in regulated markets, but it also provides added value for routine measurement tasks in the laboratory.

Efficient Processes

SevenExcellence has been designed with the objective of optimizing the workflow and making work in the laboratory more efficient. Just one click is needed to start a sample or a series of measurements and an optional autosampler improves productivity. Once set up, data archiving is a standard procedure that will take place automatically following each analysis.

Solid Compliance

SevenExcellence comes with security functions that support your workflow during all phases of calibration, measurement and archiving processes. It is suitable for routine tasks as well as professional measurements under stringent GLPconditions. Connected to LabX, SevenExcellence offers perfect compliance support.

Sustainable Value

SevenExcellence offers flexibility on all levels, ranging from the number of measurement parameters to the choice of a vast collection of peripheral devices. The instrument's interfaces allow you to connect peripherals simultaneously, supporting your workflow in the best possible way.

MODEL	CHANNEL	PARAMETER	MEASURING RANGE	RESOLUTION AND ACCURACY	INLAB® SENSOR	PART No.
S400-Basic	1	pH mV ISFET pH Temp.	−2.000 … 20.000 pH; −2000.0 … 2000.0 mV 0.000 … 14.000 pH −30.0 … 130.0 °C	0.001/0.01/0.1; ± 0.002 0.1/1; ± 0.1 0.001/0.01/0.1; ± 0.05 0.1; ± 0.1	none	30046240
S400-Kit					Expert Pro-ISM	30046241
S400-Bio					Routine Pro-ISM	30046242
S400-Micro					Ultra-Micro	30092982
S400-uMix					Expert Pro-ISM and uMix stirrer	30092983
S400-Buffer					InLab Expert Pro-ISM and Buffer Sachets	30393276
S700-Basic		Conductivity Temp.	0.001 µS/cm … 2000 mS/cm −30.0 … 130.0 °C	0.001 … 1; ± 0.5% 0.1; ± 0.1	none	30046244
S700-Kit					731-ISM	30046245
S700-Trace					Trace incl. flow cell	30046246
S500-Basic		pH mV Ion conentration Temp.	−2.000 … 20.000 pH; −2000.0 … 2000.0 mV 0 … 999 999 mg/L, ppm −30.0 … 130.0 °C	0.001/0.01/0.1; ± 0.002 0.1/1; ± 0.1 0.001 … 1; ± 0.5% 0.1; ± 0.1	none	30046248
S500-Kit					Expert Pro-ISM	30046249
S500-Bio					Routine Pro-ISM	30046250
S500-F					PerfectION Fluoride	30046251
S900-Basic		Dissolved Oxygen	0.000 … 50 mg/L, ppm	0.001 ± 0.1 mg/L from 0 … 8 ± 0.2 mg/L from 8 … 20 ± 10% from 20 … 50 0.1; ± 0.1	none	30092984
S900-Kit					OptiOx	30092986
S900-BOD		Temperature	−30.0 … 130.0 °C		OptiOx	30092987
S600-Kit		Dissolved Oxygen Temperature	0.000 … 99 mg/L, ppm	0.001; ± 0.5% 0.1; ± 0.1	605-ISM	30092985
S470-Basic	2	pH mV ISFET pH Conductivity Temp.	see S400, S700	see S400, S700	none	30046252
S470-Kit					Expert Pro-ISM and 731-ISM	30046253
S470-USP/EP					Pure Pro-ISM 741-ISM	30046254
S470-Bio					Routine Pro-ISM and 731-ISM	64091338
S475-Basic	3	see S470 , S500	see S400, S700 , S500	see S400, S700, S500	none	30046255
S479-Kit		see S470, S900	see S470, S900	see S470, S900	Expert Pro-ISM 731-ISM OptiOx	30092988
S975-uMix		see S900, S700, S500	see S900, S700, S500	see S900, S700, S500	Expert Pro-ISM 731-ISM, OptiOx and uMix stirrer	30092989

Basic Versions Include
Meter, the specified expansion units, uPlace electrode holder, semi-transparent cover, operating instructions, installation and quick guide, EasyDirect™ pH PC software, declaration of conformity and test certificate. Electrode is not included.
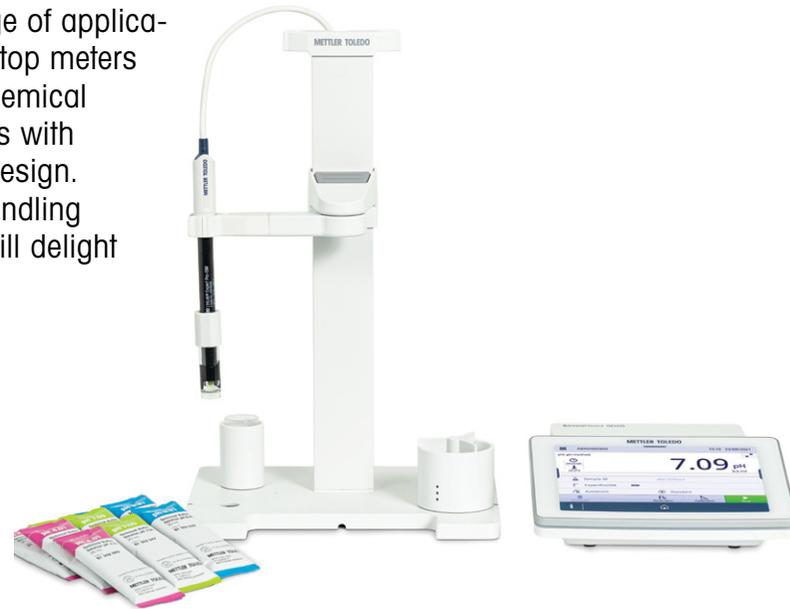
Kit Versions Include
As above plus appropriate electrode, buffer sachets and guides.

▶ **www.mt.com/SevenExcellence**

SevenDirect
Straight to the Point

Developed for a wide range of applications, SevenDirect™ benchtop meters combine precise electrochemical measurement technologies with flexibility and innovative design. Their ease of use, data handling options and robustness will delight discerning users.

MODEL/PART No.	pH	mV	COND	IONS	TEMPERATURE
SD20 Meter (30671550*)	•	•			•
SD30 Meter (30671552*)		•			•
SD50 Meter (30671551*)	•	•		•	•
SD23 Meter (30671553*)	•	•	•		•
Range	-2.000…20.000	-2,000.0… 2,000.0 mV	Conductivity: 0.000 µS/cm…2,000 mS/cm TDS: 0.00 mg/L…1,000 g/L Salinity: 0.00…80.00 psu Resistivity:0.00…100.0MΩ*cm	mmol/L, mol/L, mg/L ppm: 0…999,999 %: 0…100.000 pX:-2.000…20.000	-30.0…130.0°C
Resolution	0.1/0.01/0.001	1/0.1	Auto-range, max. 0.001	mmol/L, mg/L ppm: 0.001 mol/L, %:0.0001 pX:0.1/0.01	0.1°C
Accuracy	-0.002	±0.1 (-500.0….500.0mV) ±0.2 (-2,000.0…2,000.0mV)	0.5% of measured value	mmol/L, mol/L, mg/L ppm,%: ±0.5% of measured value pX:±0.002	±0.1 (0-100°C)
Calibration methods	Linear, Segmented	–	Linear, Manual cell constant	Linear, Segmented	–
Calibration points	1 to 5	–	1 or 2	1 to 5	–

* Basic instrument. Application-specific kits are also available.

Mastered in No Time
The intuitive user interface of the generous 7-inch touchscreen facilitates the measurement process by avoiding unnecessary steps and focusing on the most important information. On-screen instructions guide the calibration process while the integrated help system provides immediate support.

Tracks Your Records
The instruments support GLP compliance by storing time stamps as well as sample, sensor and user IDs with every measurement. Settings are protected from unwanted changes by a two level user management. Automatic data transfer to pC or printer minimizes transcriptions errors.

Tough Enough
SevenDirect meters feature a closed connector compartment to prevent corrosion and a replaceable protective cover to keep the instrument safe from dust and spills even with sensors attached (IP54 in-use).

Position Your Sensor Precisely
The EasyPlace™ electrode arm makes sensor handling easy. Dedicated positions for calibration, measurement, cleaning and storage simplify daily operation.

Stirring for Reliable Results
The EasyMix™ magnetic stirrer homogenizes samples for more accurate results. Its perfect fit with the EasyPlace™ electrode arm saves bench space.

Data Management under Control
The EasyDirect™ PC software simplifies data management. Collect data, generate reports and plots, export to a PC or print on a network printer.

▶ **www.mt.com/SevenDirect**

Flexible, Integrated and Easy to Implement
Pipette Management Simplified

- Assign locations, users and groups.
- Search and filter custom reports and schedules.
- Know everything about your pipettes.

- See all calibration data.
- Schedule calibrations.
- All critical pipette data located in one single database.

Track

Manage

Simplify
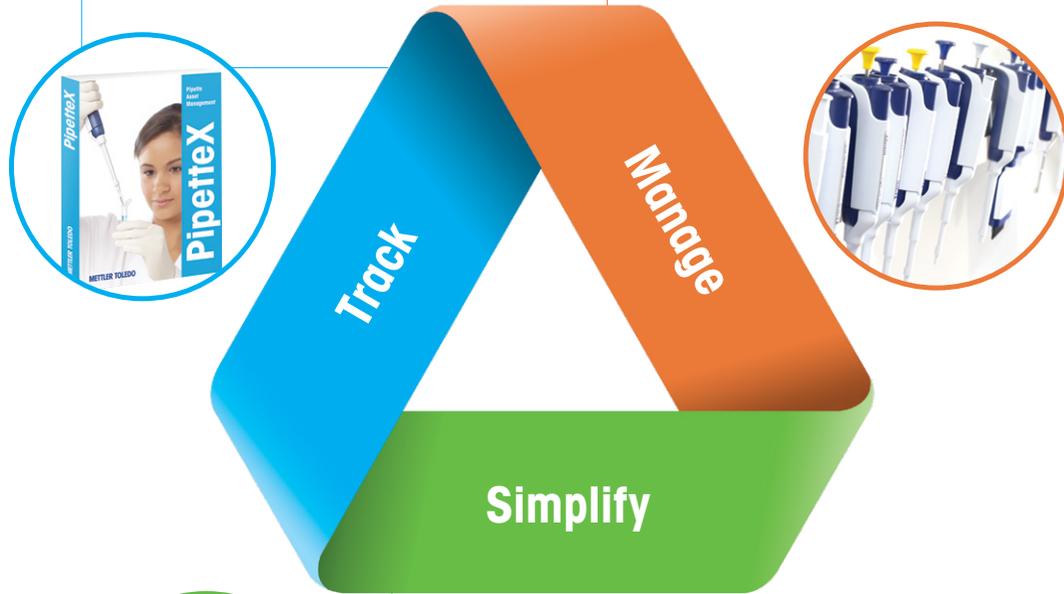
- The Bluetooth® wireless technology-enabled SmartStand electronically transmits pipette serial numbers, calibration and other relevant data to PipetteX.
- Rainin calibration certificates are electronically transmitted and linked to your pipette.
- Eliminate time-consuming reading of serial numbers, barcodes or stickers.

CATALOG No.	DESCRIPTION
30475913	PipetteX - Site
30475915	PipetteX - Unlimited
30478260	PipetteX - Site, Renewal
30478262	PipetteX - Unlimited, Renewal

PipetteX Software

Rainin SmartStand
The Intelligent Pipette Stand

By reading the RFID chip that's in every Rainin XLS and XLS+ pipette, SmartStand instantly displays the compliance status for up to four pipettes – manual or electronic. Pick up a pipette and SmartStand's color LCD screen switches to a detailed view of that pipette's service and calibration status. Works seamlessly with PipetteX!

Easy-read color screen displays pipette status

Fast RFID readers scan four pipettes at once

Charges up to four E4 pipettes simultaneously

Detachable head mounts to wall or shelf

Built-in Bluetooth® and USB mini-port

CATALOG No.	DESCRIPTION
30312897	SmartStand stand with PipetteX basic software
17001255	Universal Carousel Stand for seven pipettes
17003024	Hang-Ups, magnetic, for three pipettes
17004992	Shelf Hang-Ups for three pipettes
17006638	Adapters for E4XLS with Hang-Ups, carousel

Pipette Stands

Check out our
Starter Kits
with SmartStand

Rainin SmartCheck
Verify the Accuracy of Any Pipette

Reduce experimental errors, between-calibration compliance failures and improve pipetting technique.

Trust your pipettes! SmartCheck is a quick and easy way to verify that your pipettes are working properly. It takes very little space on the benchtop so you can use it every day.

Avoid expensive rework

Reduce out-of-tolerance challenges such as having to re-do expensive experiments or incur costly downstream process waste.

60 seconds or less!

Pipette verification in less than a minute: SmartCheck provides a clear Pass/Fail indication following a simple process with just four gravimetric measurements.

Verify any brand of pipette

Verify the performance of any brand of pipette dispensing volumes between 10 – 1000 µL. You can verify individual channels of multichannel pipettes too.

Ideal for regulated environments

SmartCheck is the only verification tool that can operate within a 21 CFR Part 11 compliant process (requires PipetteX software).

CATALOG No.	DESCRIPTION
30564095	SmartCheck SLS1010S
30448961	Function Test Kit
30448967	EasyScan RFID LAN set

SmartCheck (side label)

Rainin PipetteX
Software to Simplify Pipette Management

PipetteX™ uses the RFID tag embedded in every Rainin XLS pipette to automatically track and manage calibration data, pipette usage and location. Our simple software solution integrates with SmartStand, SmartCheck and Rainin Service to create a powerful, easy-to-use pipette tracking and calibration management system.

- Automatic transfer of calibration documentation from service center to software
- Controls all elements of calibration tracking and movement
- 21 CFR Part 11 compliant management system
- Integrated in-line pipette validations
- Manage all brands of pipettes

Rainin XLS Pipettes   **Multiple SmartStands**   **PipetteX Management Software**

RFID   Client   Server
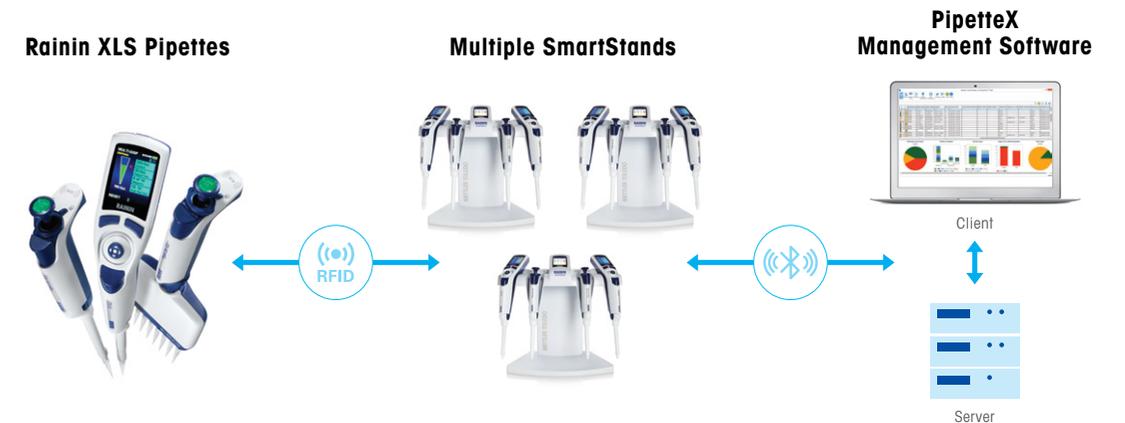
A simple, unified system for tracking and managing pipettes (all manufacturers)

Place any Rainin XLS-brand pipette on a SmartStand to instantly see the pipette's calibration status and service details right at the bench. PipetteX connects to SmartStand via Bluetooth or USB to automatically transfer serial numbers, service and other data to the PipetteX database.

PipetteX maintains a complete history of your entire pipette inventory including calibration certificates and verification reports. This makes it easy to track the status, location, calibration and service schedule for any pipette.

That's pipette management…simplified!

Rainin MicroPro

Portable 96-Channel Pipetting

- Small footprint; light in weight
- 20, 300 and 1250 µL models
- Easy to use
- Affordable

Streamline your 96-, 384-, and deep-well microplate work!

For more information on the new MicroPro, .

METTLER TOLEDO