

Shop RAININ

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Product Catalog 2018

You Spoke. We Listened.

Same great tips in new packaging!

Our new
rack & refill
system



METTLER TOLEDO

7

Great Reasons to Choose Rainin!

Our new tip rack and refill system offers superior convenience and performance.



1 Hinged/Lift-off Lid

Our innovative new hinged rack holds the lid open to a wide 120° or gently releases to function as a lift-off lid.

2 BioClean Ultra

With the new Ultra quality test, Rainin's tip purity standard continues to be industry leading.

3 Multichannel Friendly

The wide-opening lid and unique tip deck design allows full or partial multichannel loading from any angle.

4 Less Plastic, Lighter Weight

Precision engineering has resulted in a sturdy, stable rack that requires 20% less plastic.

5 Easy-open Latch

Our new latch keeps tips safe and secure, and opens easily with one hand.



6 Stackable, Space-Saving

These new racks stack five-high to save space and create a more organized bench.

7 Fully Autoclavable

Perfect for our Green-Pak and SpaceSaver refill systems, our new rack is designed to withstand many trips through the autoclave.

In this issue

Pipette Tips

| | |
|-------------------------------------|----|
| Individual rack tips | 4 |
| SpaceSaver™ and Green-Pak™ tips | 6 |
| Low retention tips | 8 |
| TerraRack™ tips | 10 |
| StableStak™, StableRak™ & bulk tips | 12 |
| Specialty tips | 14 |

LTS™ LiteTouch™ System

16

Pipettes

| | |
|--|----|
| Single channel manual and electronic XLS+™ | 18 |
| Multichannel manual and electronic XLS+ | 22 |
| Adjustable Spacer XLS™ | 24 |
| Rainin Classic™ | 26 |
| Positive displacement with Rainin Pos-D™ | 27 |
| XLS+ Starter Kits with SmartStand | 28 |
| Pipette stands | 29 |
| Pipette specifications | 30 |

High Throughput Pipetting

| | |
|--------------------------------------|----|
| BenchSmart™ 96 semi-automated system | 32 |
| Liquidator™ 96 manual system | 36 |

Protein Purification

| | |
|--------------------------------------|----|
| PureSpeed™ sample preparation system | 40 |
|--------------------------------------|----|

Specialty Pipettes

| | |
|--------------------------------------|----|
| Repeat dispensing with AutoRep™ | 44 |
| Large volume dispensing with Disp-X™ | 46 |
| Large volume pipetting with Pipet-X™ | 47 |

Pipette Service

48

Good Pipetting Practice (GPP)

49

SmartStand

50

Racked Tips

SBS Standard Tip Packaging

Removable-cover Racks

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



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

| CATALOG No. | VOL | | QTY | | FEATURES | | | |
|-----------------|---------------------|----|--------------|-------------|------------|------------|--------|--------|
| | MAX VOLUME | | RACKS/CARTON | TIPS/CARTON | STERILIZED | SHAFTGUARD | WIDE-O | FILTER |
| 30389200 | 20 µL ¹ | 10 | 960 | | | | | |
| 30389228 | 20 µL ¹ | 10 | 960 | ✓ | | | | |
| 30389225 | 20 µL ¹ | 10 | 960 | ✓ | | | | ✓ |
| 30389243 | 200 µL ² | 10 | 960 | | | | | |
| 30389247 | 200 µL ² | 10 | 960 | | | ✓ | | |
| 30389245 | 200 µL ² | 10 | 960 | ✓ | | | | |
| 30389249 | 200 µL ² | 10 | 960 | ✓ | | ✓ | | |
| 30389239 | 200 µL ² | 10 | 960 | ✓ | | | | ✓ |
| 30389253 | 300 µL | 8 | 768 | | | | | |
| 30389255 | 300 µL | 8 | 768 | ✓ | | | | |
| 30389254 | 300 µL | 8 | 768 | ✓ | | | | ✓ |
| 30389211 | 1000 µL | 8 | 768 | | | | | |
| 30389217 | 1000 µL | 8 | 768 | | | ✓ | | |
| 30389215 | 1000 µL | 8 | 768 | ✓ | | | | |
| 30389220 | 1000 µL | 8 | 768 | ✓ | | ✓ | | |
| 30389212 | 1000 µL | 8 | 768 | ✓ | | | | ✓ |
| 30389230 | 1200 µL | 8 | 768 | | | | | |
| 30389234 | 1200 µL | 8 | 768 | ✓ | | | | |
| 30389231 | 1200 µL | 8 | 768 | ✓ | | | | ✓ |
| 30389236 | 2000 µL | 8 | 480 | | | | | |
| 30389238 | 2000 µL | 8 | 480 | ✓ | | | | |
| 30389237 | 2000 µL | 8 | 480 | ✓ | | | | ✓ |
| 30389256 | 5000 µL | 8 | 192 | | | | | |
| 30389257 | 5000 µL | 8 | 192 | ✓ | | | | |

Hinged-Lid-Cover RT-Racks

Rainin



Fast loading

Robust secure racks make tip loading easy

Autoclavable

Two-position lid for efficient sterilization

Format options

Standard, pre-sterilized, and filter versions available

Protective

Safe from dirt and contamination



CATALOG No.

| | VOL | | QTY | | FEATURES | | | |
|-----------------|------------|--------------|-------------|------------|------------|--------|--------|--|
| | MAX VOLUME | RACKS/CARTON | TIPS/CARTON | STERILIZED | SHAFTGUARD | WIDE-O | FILTER | |
| 30389163 | 10 µL | 10 | 960 | | | | | |
| 30389174 | 10 µL | 10 | 960 | | ✓ | | | |
| 30389178 | 10 µL | 10 | 960 | ✓ | ✓ | | | |
| 30389181 | 10 µL | 10 | 960 | ✓ | | | | |
| 30389172 | 10 µL | 10 | 960 | ✓ | | | ✓ | |
| 30389175 | 10 µL | 10 | 960 | ✓ | ✓ | | ✓ | |
| 30389189 | 20 µL | 10 | 960 | ✓ | | | ✓ | |
| 30389170 | 100 µL | 10 | 960 | ✓ | | | ✓ | |
| 30389186 | 200 µL | 10 | 960 | ✓ | | | ✓ | |
| 30389191 | 250 µL | 10 | 960 | | | | | |
| 30389195 | 250 µL | 10 | 960 | | | ✓ | | |
| 30389193 | 250 µL | 10 | 960 | ✓ | | | | |
| 30389058 | 300 µL | 8 | 768 | | | | | |
| 30389059 | 300 µL | 8 | 768 | ✓ | | | | |
| 30389136 | 300 µL | 8 | 768 | ✓ | | | ✓ | |
| 30389164 | 1000 µL | 8 | 768 | | | | | |
| 30389168 | 1000 µL | 8 | 768 | ✓ | | | | |
| 30389165 | 1000 µL | 8 | 768 | ✓ | | | ✓ | |
| 30389183 | 2000 µL | 8 | 480 | | | | | |
| 30389185 | 2000 µL | 8 | 480 | ✓ | | | | |
| 30389184 | 2000 µL | 8 | 480 | ✓ | | | ✓ | |
| 30389198 | 5000 µL | 8 | 192 | | | | | |
| 30389199 | 5000 µL | 8 | 192 | ✓ | | | | |

Hinged-Lid-Cover RT-Racks

Wide-O = Wide Orifice

Eco-Friendly Refills

Less Waste, More Space



Space-saving rack refill options enhance your workflow and minimize plastic waste.

Green-Pak™ SpaceSaver™ 85% less waste than conventional racks

Fast

Refill a rack
in seconds

Clean

Protects tip from
contamination

Convenient

Dispensing sleeve
is easy to use

Save space

Each sleeve contains
8 or 10 refills



Green-Pak™ Individually sealed refills

Clean

Each refill is
completely sealed

Filter tips

A great refill option
for filter tip users

Easy

Load refills without
touching the tip

Eco-sensitive

Protective shell made
from recycled PETE





Rack base not included with Green-Pak SpaceSaver



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

Rack base not included with Green-Pak SpaceSaver



| | CATALOG No. | VOL | | QTY | | FEATURES | | |
|--------------------------|-------------|---------------------|--------------|-------------|------------|------------|--------|--|
| | | MAX VOLUME | RACKS/CARTON | TIPS/CARTON | STERILIZED | SHAFTGUARD | FILTER | |
| Spacesaver | 30389291 | 20 µL ¹ | 10 | 960 | | | | |
| | 30389297 | 20 µL ¹ | 10 | 960 | ✓ | | | |
| | 30389299 | 200 µL ² | 10 | 960 | | | | |
| | 30389301 | 200 µL ² | 10 | 960 | ✓ | | | |
| | 30389303 | 300 µL | 8 | 768 | | | | |
| | 30389304 | 300 µL | 8 | 768 | ✓ | | | |
| | 30389292 | 1000 µL | 8 | 768 | | | | |
| | 30389294 | 1000 µL | 8 | 768 | ✓ | | | |
| Green-Pak Refills | 30389270 | 20 µL ¹ | 10 | 960 | | | | |
| | 30389275 | 20 µL ¹ | 10 | 960 | ✓ | | | |
| | 30389274 | 20 µL ¹ | 10 | 960 | ✓ | | ✓ | |
| | 30389277 | 200 µL ² | 10 | 960 | | | | |
| | 30389278 | 200 µL ² | 10 | 960 | ✓ | | | |
| | 30389276 | 200 µL ² | 10 | 960 | ✓ | | ✓ | |
| | 30389271 | 1000 µL | 8 | 768 | | | | |
| | 30389273 | 1000 µL | 8 | 768 | ✓ | | | |
| 30389272 | 1000 µL | 8 | 768 | ✓ | | | ✓ | |
| Empty Racks | 30389354 | 20 µL | 10 | | | | | |
| | 30389353 | 200 µL | 10 | | | | | |
| | 30397667 | 300 µL | 8 | | | | | |
| | 30389351 | 1000 µL | 8 | | | | | |
| Spacesaver | 30389283 | 10 µL | 10 | 960 | | ✓ | | |
| | 30389285 | 10 µL | 10 | 960 | ✓ | ✓ | | |
| | 30389287 | 250 µL | 10 | 960 | | | | |
| | 30389289 | 250 µL | 10 | 960 | ✓ | | | |
| | 30397665 | 300 µL | 8 | 768 | | | | |
| | 30397666 | 300 µL | 8 | 768 | ✓ | | | |
| | 30389279 | 1000 µL | 8 | 768 | | | | |
| | 30389281 | 1000 µL | 8 | 768 | ✓ | | | |
| Green-Pak Refills | 30389258 | 10 µL | 10 | 960 | | | | |
| | 30389265 | 10 µL | 10 | 960 | ✓ | | | |
| | 30389263 | 10 µL | 10 | 960 | ✓ | | ✓ | |
| | 30389264 | 10 µL | 10 | 960 | ✓ | ✓ | ✓ | |
| | 30389267 | 20 µL | 10 | 960 | ✓ | | ✓ | |
| | 30389266 | 200 µL | 10 | 960 | ✓ | | ✓ | |
| | 30389268 | 250 µL | 10 | 960 | | | | |
| | 30389269 | 250 µL | 10 | 960 | ✓ | | | |
| | 30389259 | 1000 µL | 8 | 768 | | | | |
| | 30389261 | 1000 µL | 8 | 768 | ✓ | | | |
| 30389260 | 1000 µL | 8 | 768 | ✓ | | | ✓ | |
| Empty Racks | 30389350 | 10 µL | 10 | | | | | |
| | 30389354 | 10 µL | 10 | | | | | |
| | 30389353 | 250 µL | 10 | | | | | |
| | 30397667 | 300 µL | 8 | | | | | |
| | 30389351 | 1000 µL | 8 | | | | | |

DOMINIQUÉ DUBOIS

Low Retention Tips

Stop Wasting Valuable Sample!

Rainin LR low retention tips improve pipetting accuracy by minimizing residual volume, particularly when transferring liquids such as viscous samples and those with low surface tension. Minimize waste when handling valuable samples and reagents.

LTS



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

Rack base not included with Green-Pak SpaceSaver



| CATALOG No. | VOL | | QTY | | FEATURES | | |
|-----------------|---------------------|----|--------------|-------------|------------|--------|-------------------|
| | MAX VOLUME | | RACKS/CARTON | TIPS/CARTON | STERILIZED | WIDE-O | LOW RET FILTER |
| 30389227 | 20 µL ¹ | 10 | 960 | | | ✓ | |
| 30389229 | 20 µL ¹ | 10 | 960 | ✓ | | ✓ | |
| 30389226 | 20 µL ¹ | 10 | 960 | ✓ | | ✓ | ✓ |
| 30389244 | 200 µL ² | 10 | 960 | | | ✓ | |
| 30389248 | 200 µL ² | 10 | 960 | | ✓ | ✓ | |
| 30389246 | 200 µL ² | 10 | 960 | ✓ | | ✓ | |
| 30389250 | 200 µL ² | 10 | 960 | ✓ | ✓ | ✓ | |
| 30389240 | 200 µL ² | 10 | 960 | ✓ | | ✓ | ✓ |
| 30389241 | 200 µL ² | 10 | 960 | ✓ | ✓ | ✓ | ✓ |
| 30389160 | 300 µL | 8 | 768 | | | ✓ | |
| 30389161 | 300 µL | 8 | 768 | ✓ | | ✓ | |
| 30389162 | 300 µL | 8 | 768 | ✓ | | ✓ | ✓ |
| 30389214 | 1000 µL | 8 | 768 | | | ✓ | |
| 30389216 | 1000 µL | 8 | 768 | ✓ | | ✓ | |
| 30389213 | 1000 µL | 8 | 768 | ✓ | | ✓ | ✓ |
| 30389219 | 1000 µL | 8 | 768 | | ✓ | ✓ | |
| 30389221 | 1000 µL | 8 | 768 | ✓ | ✓ | ✓ | |
| 30389218 | 1000 µL | 8 | 768 | ✓ | ✓ | ✓ | ✓ |
| 30389233 | 1200 µL | 8 | 768 | | | ✓ | |
| 30389235 | 1200 µL | 8 | 768 | ✓ | | ✓ | |
| 30389232 | 1200 µL | 8 | 768 | ✓ | | ✓ | ✓ |
| 30389296 | 20 µL ¹ | 10 | 960 | | | ✓ | |
| 30389298 | 20 µL ¹ | 10 | 960 | ✓ | | ✓ | |
| 30389300 | 200 µL ² | 10 | 960 | | | ✓ | |
| 30389302 | 200 µL ² | 10 | 960 | ✓ | | ✓ | |
| 30389885 | 300 µL | 8 | 768 | ✓ | | ✓ | |
| 30389293 | 1000 µL | 8 | 768 | | | ✓ | |
| 30389295 | 1000 µL | 8 | 768 | ✓ | | ✓ | |
| 17014340 | 20 µL | | 1000 | | | ✓ | |
| 17014341 | 200 µL | | 1000 | | | ✓ | |
| 17014342 | 1000 µL | | 1000 | | | ✓ | |

Rainin Standard
10 µL Tip
after dispensing



Rainin Low Retention
10 µL Tip
after dispensing



| CATALOG No. | VOL | | QTY | | FEATURES | | | | |
|-----------------|------------|----|--------------|-------------|------------|------------|--------|---------|--------|
| | MAX VOLUME | | RACKS/CARTON | TIPS/CARTON | STERILIZED | SHAFT/GARD | WIDE-O | LOW RET | FILTER |
| 30389180 | 10 µL | 10 | 960 | | | | | ✓ | |
| 30389182 | 10 µL | 10 | 960 | | ✓ | | | ✓ | |
| 30389173 | 10 µL | 10 | 960 | | ✓ | | | ✓ | ✓ |
| 30389177 | 10 µL | 10 | 960 | | | ✓ | | ✓ | |
| 30389179 | 10 µL | 10 | 960 | | ✓ | ✓ | | ✓ | |
| 30389176 | 10 µL | 10 | 960 | | ✓ | ✓ | | ✓ | ✓ |
| 30389190 | 20 µL | 10 | 960 | | ✓ | | | ✓ | ✓ |
| 30389171 | 100 µL | 10 | 960 | | ✓ | | | ✓ | ✓ |
| 30389187 | 200 µL | 10 | 960 | | ✓ | | | ✓ | ✓ |
| 30389188 | 200 µL | 10 | 960 | | ✓ | | ✓ | ✓ | ✓ |
| 30389192 | 250 µL | 10 | 960 | | | | | ✓ | |
| 30389196 | 250 µL | 10 | 960 | | | | ✓ | ✓ | |
| 30389194 | 250 µL | 10 | 960 | | ✓ | | | ✓ | |
| 30389197 | 250 µL | 10 | 960 | | ✓ | | ✓ | ✓ | |
| 30389137 | 300 µL | 8 | 768 | | | | | ✓ | |
| 30389138 | 300 µL | 8 | 768 | | ✓ | | | ✓ | |
| 30389139 | 300 µL | 8 | 768 | | ✓ | | | ✓ | ✓ |
| 30389167 | 1000 µL | 8 | 768 | | | | | ✓ | |
| 30389169 | 1000 µL | 8 | 768 | | ✓ | | | ✓ | |
| 30389166 | 1000 µL | 8 | 768 | | ✓ | | | ✓ | ✓ |
| 30389284 | 10 µL | 10 | 960 | | | ✓ | | ✓ | |
| 30389286 | 10 µL | 10 | 960 | | ✓ | ✓ | | ✓ | |
| 30389288 | 250 µL | 10 | 960 | | | | | ✓ | |
| 30389290 | 250 µL | 10 | 960 | | ✓ | | | ✓ | |
| 30389280 | 1000 µL | 8 | 768 | | | | | ✓ | |
| 30389282 | 1000 µL | 8 | 768 | | ✓ | | | ✓ | |
| 17014395 | 10 µL | | 1000 | | | | | ✓ | |
| 17014396 | 10 µL | | 1000 | | | ✓ | | ✓ | |
| 17014397 | 250 µL | | 1000 | | | | | ✓ | |
| 17014398 | 1000 µL | | 1000 | | | | | ✓ | |
| 17015068 | 1000 µL | | 1000 | | | | ✓ | ✓ | |

Rack base not included with Green-Pak SpaceSaver



Wide-O = Wide Orifice, Low Ret = Low Retention

TerraRack

The Most Eco-Friendly Rack Around

Less weight, less waste, 100% recyclable

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

For convenience and complete cleanliness, TerraRacks with BioClean tips come pre-sterilized, eliminating the need to autoclave.



| CATALOG No. | VOL | QTY | | FEATURES | | |
|-----------------|---------------------|------------|--------------|-------------|---------------|------------|
| | | MAX VOLUME | RACKS/CARTON | TIPS/CARTON | PRESTERILIZED | SHAFTGUARD |
| 17014960 | 20 µL ¹ | 10 | 960 | ✓ | | |
| 17014961 | 20 µL ¹ | 10 | 960 | ✓ | | ✓ |
| 17014962 | 200 µL ² | 10 | 960 | ✓ | | |
| 17014963 | 200 µL ² | 10 | 960 | ✓ | | ✓ |
| 17014964 | 300 µL | 8 | 768 | ✓ | | |
| 17014965 | 300 µL | 8 | 768 | ✓ | | ✓ |
| 17014966 | 1000 µL | 8 | 768 | ✓ | | |
| 17014967 | 1000 µL | 8 | 768 | ✓ | | ✓ |
| 17014968 | 1200 µL | 8 | 768 | ✓ | | |
| 17014969 | 1200 µL | 8 | 768 | ✓ | | ✓ |
| 17014970 | 10 µL | 10 | 960 | ✓ | | |
| 17014971 | 10 µL | 10 | 960 | ✓ | | ✓ |
| 17014972 | 10 µL | 10 | 960 | ✓ | ✓ | |
| 17014973 | 10 µL | 10 | 960 | ✓ | ✓ | ✓ |
| 17014974 | 30 µL | 10 | 960 | ✓ | | ✓ |
| 17014975 | 100 µL | 10 | 960 | ✓ | | ✓ |
| 17014977 | 200 µL | 10 | 960 | ✓ | | ✓ |
| 17014976 | 250 µL | 10 | 960 | ✓ | | |
| 17014978 | 300 µL | 8 | 768 | ✓ | | |
| 17014979 | 300 µL | 8 | 768 | ✓ | | ✓ |
| 17014980 | 1000 µL | 8 | 768 | ✓ | | |
| 17014981 | 1000 µL | 8 | 768 | ✓ | | ✓ |



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



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 PETE, which is easily recycled and aggressively recovered from the plastic waste stream.



Sterile

TerraRacks are pre-sterilized so you can be certain that you're working with a fresh, clean rack every time.

Double-96 Racked Tips

StableStak and StableRak

Ideal for high production environments.

StableRak™

Individual double-96 racks with 192 tips per layer.



Formats

Standard, presterilized and filter versions available

Protective

Safe from dirt and contamination

Fast loading

Sturdy, non-slip racks make tip loading easy

StableStak™

Stacked double-96 racks with 192 tips per layer.



StableRak and StableStak



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



Bulk Tips
 LTS and UNV formats



| | CATALOG No. | VOL | | QTY | | FEATURES | | | |
|-------------------|-------------|---------------------|--------------|-------------|---------------|----------|------------|--------|--|
| | | MAX VOLUME | PACKS/CARTON | TIPS/CARTON | PRESTERILIZED | FILTER | SHAFTGUARD | WIDE-O | |
| StableRak | 17005862 | 20 µL ¹ | 5 | 960 | | | | | |
| | 17005861 | 20 µL ¹ | 5 | 960 | ✓ | | | | |
| | 17005860 | 20 µL ¹ | 5 | 960 | ✓ | ✓ | | | |
| | 17005864 | 200 µL ² | 5 | 960 | | | | | |
| | 17005863 | 200 µL ² | 5 | 960 | ✓ | | | | |
| | 17005859 | 200 µL ² | 5 | 960 | ✓ | ✓ | | | |
| | 17005867 | 300 µL | 4 | 768 | | | | | |
| | 17005866 | 300 µL | 4 | 768 | ✓ | | | | |
| | 17005865 | 300 µL | 4 | 768 | ✓ | ✓ | | | |
| | 17007083 | 1000 µL | 4 | 768 | | | | | |
| | 17007082 | 1000 µL | 4 | 768 | ✓ | | | | |
| | 17007081 | 1000 µL | 4 | 768 | ✓ | ✓ | | | |
| | 17007086 | 1200 µL | 4 | 768 | | | | | |
| | 17007085 | 1200 µL | 4 | 768 | ✓ | | | | |
| 17007084 | 1200 µL | 4 | 768 | ✓ | ✓ | | | | |
| StableStak | 17005873 | 20 µL ¹ | 5 | 960 | | | | | |
| | 17005872 | 20 µL ¹ | 5 | 960 | ✓ | | | | |
| | 17005875 | 200 µL ² | 5 | 960 | | | | | |
| | 17005874 | 200 µL ² | 5 | 960 | ✓ | | | | |
| | 17005877 | 300 µL | 4 | 768 | | | | | |
| | 17005876 | 300 µL | 4 | 768 | ✓ | | | | |
| | 17007090 | 1000 µL | 4 | 768 | | | | | |
| | 17007089 | 1000 µL | 4 | 768 | ✓ | | | | |
| 17005857 | 300 µL | 4 | 768 | | | | | | |
| Bulk Tips | 17001128 | 20 µL ¹ | | 1000 | | | | | |
| | 17001118 | 200 µL ² | | 1000 | | | | | |
| | 17001132 | 300 µL | | 1000 | | | | | |
| | 17001129 | 1000 µL | | 1000 | | | | | |
| | 17006324 | 1200 µL | | 1000 | | | | | |
| | 17001130 | 2000 µL | | 1000 | | | | | |
| | 17001133 | 5000 µL | | 1000 | | | | | |
| | 17001119 | 10 mL | | 200 | | | | | |
| | 17005940* | 10 mL | | 75 | ✓ | | | | |
| | 17001131 | 20 mL | | 100 | | | | | |
| | 17005941* | 20 mL | | 50 | ✓ | | | | |
| Bulk Tips | 17001124 | 10 µL | 5 | 960 | | | | | |
| | 17001123 | 10 µL | 5 | 960 | | | ✓ | | |
| | 17001116 | 250 µL | 5 | 960 | | | | | |
| | 17001127 | 250 µL | 5 | 960 | | | | ✓ | |
| | 17001121 | 1000 µL | 5 | 960 | | | | | |
| | 17001125 | 2000 µL | 5 | 960 | | | | | |
| | 17001126 | 2500 µL | 4 | 768 | | | | | |
| | 17001117 | 5000 µL | 4 | 768 | | | | | |
| | 17001122 | 10 mL | 4 | 768 | | | | | |
| | 17005939* | 10 mL | 4 | 768 | ✓ | | | | |

*individually wrapped

Wide-O = Wide Orifice

Specialty Tips

Unique Tips for Special Applications



Extended-length tips

For tall narrow tube work.
BioClean.

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.



Wide-orifice tips

Ideal for delicate samples.
BioClean.

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. 250 and 1000 μ L.



ShaftGuard™ 10 μ L tips

Avoid cross-contamination.
BioClean.

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.



Gel-Well™

Load gels in thin wells.

Dispense samples into thin wells in electrophoretic slab gel apparatus or in sample recovery. Flexible ultra-thin micro-capillary is ideal for DNA sequencing and protein separation. Autoclaving at 1 bar and 121°C up to 15 minutes is possible without significant capillary shrinkage or closure.

- Flat or round tip ends
- Certified free from RNase and DNase

| LTS | CATALOG No. | VOL | | QTY | | FEATURES | | | | |
|------------------|-------------|---------------------|--------------|-------------|---------------|----------|---------|--------|----------|---|
| | | MAX VOLUME | RACKS/CARTON | TIPS/CARTON | PRESTERILIZED | WIDE-O | LOW RET | FILTER | X-LENGTH | |
| | | | | | | | | | | |
| Hinged-Lid Racks | 30389251 | 200 µL ² | 8 | 768 | | | | | | ✓ |
| | 30389252 | 200 µL ² | 8 | 768 | ✓ | | | | | ✓ |
| | 30389242 | 200 µL ² | 8 | 768 | ✓ | | | | ✓ | ✓ |
| | 30389222 | 1000 µL | 8 | 768 | | | | ✓ | | ✓ |
| | 30389224 | 1000 µL | 8 | 768 | ✓ | | | | | ✓ |
| | 30389223 | 1000 µL | 8 | 768 | ✓ | | | ✓ | | ✓ |
| | 30389247 | 200 µL ² | 10 | 960 | | ✓ | | | | |
| | 30389248 | 200 µL ² | 10 | 960 | | ✓ | ✓ | | | |
| | 30389249 | 200 µL ² | 10 | 960 | ✓ | ✓ | | | | |
| | 30389250 | 200 µL ² | 10 | 960 | ✓ | ✓ | ✓ | | | |
| | 30389241 | 200 µL | 10 | 960 | ✓ | ✓ | ✓ | ✓ | | |
| | 30389217 | 1000 µL | 8 | 768 | | ✓ | | | | |
| | 30389219 | 1000 µL | 8 | 768 | | ✓ | ✓ | | | |
| | 30389220 | 1000 µL | 8 | 768 | ✓ | ✓ | | | | |
| | 30389221 | 1000 µL | 8 | 768 | ✓ | ✓ | ✓ | | | |
| | 30389218 | 1000 µL | 8 | 768 | ✓ | ✓ | ✓ | ✓ | | |

² Fits 50, 100 and 200 µL pipettes

| UNV | CATALOG No. | VOL | | QTY | | FEATURES | | | | |
|---------|-------------|------------|--------------|-------------|---------------|----------|------------|--------|---------|----------------|
| | | MAX VOLUME | RACKS/CARTON | TIPS/CARTON | PRESTERILIZED | GEL-WELL | SHAFTGUARD | WIDE-O | LOW RET | FILTER |
| | | | | | | | | | | |
| Racks | 30389174 | 10 µL | 10 | 960 | | | ✓ | | | |
| | 30389178 | 10 µL | 10 | 960 | ✓ | | ✓ | | | |
| | 30389175 | 10 µL | 10 | 960 | ✓ | | ✓ | | | ✓ |
| | 30389195 | 250 µL | 10 | 960 | | | | ✓ | | |
| | 30389196 | 250 µL | 10 | 960 | | | | ✓ | ✓ | |
| | 30389197 | 250 µL | 10 | 960 | ✓ | | | ✓ | ✓ | |
| | 30389188 | 250 µL | 10 | 960 | ✓ | | | ✓ | | ✓ |
| Bulk | 17001127 | 250 µL | | 1000 | | | | ✓ | | |
| | 17015068 | 1000 µL | | 1000 | | | | ✓ | ✓ | |
| Refills | 30389283* | 10 µL | 10 | 960 | | | ✓ | | | |
| | 30389285* | 10 µL | 10 | 960 | ✓ | | ✓ | | | |
| | 30389264 | 10 µL | 10 | 960 | ✓ | | ✓ | | | ✓ |
| Racks | 17002375 | 10 µL | 1 | 200 | | ✓ | | | | 0.17 mm, flat |
| | 17002377 | 10 µL | 1 | 200 | | ✓ | | | | 0.37 mm, flat |
| | 17002380 | 10 µL | 1 | 200 | | ✓ | | | | 0.57 mm, round |
| | 17002379 | 250 µL | 1 | 200 | | ✓ | | | | 0.57 mm, flat |
| | 17002378 | 250 µL | 1 | 200 | | ✓ | | | | 0.37 mm, flat |
| | 17002376 | 250 µL | 1 | 200 | | ✓ | | | | 0.17 mm, round |

*Green-Pak SpaceSaver

Wide-O = Wide Orifice, Low Ret = Low Retention

The LTS LiteTouch System

Because Pipetting Shouldn't Hurt

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

The Rainin LTS® LiteTouch system is available on all Rainin XLS+ single and multichannel pipettes.

Pipetting is a forceful, repetitive activity that can result in minor stresses that develop into injuries. The Rainin LTS™ LiteTouch tip ejection system reduces tip ejection force by up to 85%.

Because pipettes are integral to so many laboratory workflows, their design and features affect performance and ergonomic impact on users.

- Accuracy and precision impacts liquid delivery to drive data integrity.
- Tip ejection force directly correlates to muscle fatigue that can compromise technique, accuracy, and repeatability.
- Versatility with a variety of tip selections and adjustability for use in multiple applications.

A pipette's ergonomic features are essential.

- Countless hours pipetting samples can lead to injured hands, wrists, and arms.
- Loading and ejecting tips, and aspirating and dispensing liquids exerts considerable force on your thumb, hand and arm.
- Risk of developing a RSI increases as injurious effects of tip ejection forces accumulate over time.





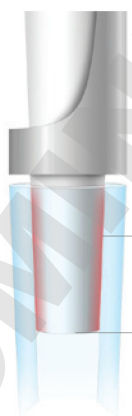
Small sealing ring
significantly reduces friction

Positive stop
prevents jamming

The LTS difference

The Rainin LifeTouch 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, air-tight fit with minimal force
- A thin sealing ring near the top of an LTS tip virtually eliminates friction between the tip and shaft



Large sealing area
creates high friction

Conical shaft
stretches the tip

Universal pipetting

Universal pipettes have cone-shaped shafts that rely on friction to hold tips firmly.

- Universal tips stretch to fit around the shaft
- Users typically apply force to the shaft to achieve a reliable friction seal
- Due to the excessive force used to insert the tip, a high force is required to eject the tip

Pipet-Lite XLS+

Performance You Can Feel

Rainin Pipet-Lite™ XLS+ raises the bar on comfort, performance and control.

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.

Total comfort

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

A better tip ejector

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



For pipette specifications, see page 30.



- **GLP/GMP security**

Every Rainin XLS pipette is equipped with RFID – radio frequency identification – for accessing service and calibration data right from the pipette.

- **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.

LTS

| | CATALOG No. | VOLUME RANGE |
|-----------------|-------------|--------------|
| Pipet-Lite XLS+ | 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 |

Rainin LTS pipettes are designed for use with LTS tips.
See LTS page 16.

UNV

| | CATALOG No. | VOLUME RANGE |
|-----------------|-------------|--------------|
| Pipet-Lite XLS+ | 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 |

E4 XLS+

Simple, Versatile and Secure

Our easiest to use, most richly featured and secure electronic pipette.

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 on board for later use.

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

Watch the E4 XLS demo ► www.mt.com/raininE4



• A “Smart” Charging Stand!

SmartStand charges up to four E4s simultaneously and offers a simple, yet sophisticated way to track and manage every XLS pipette in your lab. See page 54.

Performance

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

App master

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

Save your protocols

Store multiple custom protocols in the on-board 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.



• GLP/GMP security

Minimize pipetting SOP deviations 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.


LTS

| | CATALOG No. | VOLUME RANGE |
|----------------|-------------|--------------|
| E4 XLS+ | 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 |

Rainin LTS pipettes are designed for use with LTS tips. Li-Ion battery and wall power supply are included.

UNV

| | CATALOG No. | VOLUME RANGE |
|----------------|-------------|--------------|
| E4 XLS+ | 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-Fit pipettes use universal tips. Li-Ion battery and wall power supply are included. Specifications, see page 30.

XLS+ Multichannels

Performance You Can Feel!

8 or 12 channels; volumes from 0.5–1200 µL.

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

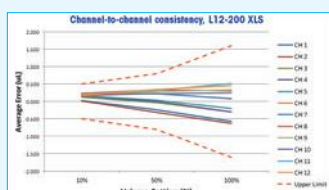
| CATALOG No. | VOLUME RANGE |
|-------------------|--------------|
| 8-Channel | |
| 17013792 | 0.5–10 µL |
| 17013793 | 2–20 µL |
| 17013794 | 5–50 µL |
| 17013795 | 20–200 µL |
| 17013796 | 20–300 µL |
| 17014498 | 100–1200 µL |
| 12-Channel | |
| 17013797 | 0.5–10 µL |
| 17013798 | 2–20 µL |
| 17013799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

Li-Ion battery and wall power supply are included.
Specifications, see page 30.

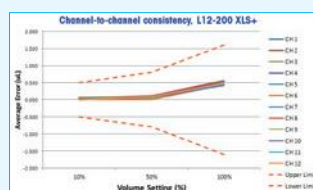


Exceptional Channel-to-Channel Consistency

The channel-to-channel consistency on the previous generation of XLS multichannel pipettes was very good. However, the radical new technology of the XLS+ delivers superior channel-to-channel consistency.



L12-200XLS



L12-200XLS+

Pipet-Lite XLS+ Manual Multichannel

Ergonomic design

- Balanced, lightweight, lower 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 |

Rainin LTS pipettes are designed for use with LTS tips. Specifications, see page 30.



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.



Pipet-Lite XLS Manual

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 | 6-Channel | |
| | 17011841 | 20–300 µL |
| | 17011840 | 100–1200 µL |
| | 8-Channel | |
| | 17011844 | 5–50 µL |
| | 17011843 | 20–300 µL |
| | 17011842 | 100–1200 µL |

Rainin LTS pipettes are designed for use with LTS tips. Specifications, see page 30.



E4 XLS Electronic

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 | 6-Channel | |
| | 17012327 | 20–300 µL |
| | 17012328 | 100–1200 µL |
| | 8-Channel | |
| | 17012329 | 5–50 µL |
| | 17012330 | 20–300 µL |
| | 17012331 | 100–1200 µL |

Rainin LTS pipettes are designed for use with LTS tips. Specifications, see page 30.

Li-Ion battery and wall power supply are included.

Rainin Classic

Timeless Design, Exceptional Performance

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

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 quality PVDF ensure fewer out-of-tolerance failures and low cost of ownership.

Lower plunger force

Plunger force in Rainin Classic is 25% less than in similar pipettes.

Comfort

The fingerhook allows a lighter grip during pipetting cycles.



| | 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 |

Rainin Classic pipettes use universal tips. Specifications, see page 30.

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, pre-sterilized capillaries are packed in convenient racks.

No cross contamination

Positive displacement prevents aerosol formation and protects samples from contamination.



| CATALOG No. | VOL | | QTY | | |
|--------------------------------|------------|-------------|--------------|-------------|---|
| | MAX VOLUME | | RACKS/CARTON | TIPS/CARTON | |
| 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 | |

New Pipette Starter Kits

14 Easy Ways to Buy New XLS+ Pipettes

SmartStand + EasyDirect software
= Easy Pipette Management



Each Starter Kit includes a SmartStand and EasyDirect software.

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



| CATALOG No. | Single Channel Manual | | | | | | Multichannel Manual | | | | Single Channel Electronic | | | SmartStand |
|---------------------|-----------------------|-------|-------|--------|---------|---------|---------------------|------------------|------------------|-------------------|---------------------------|--------|---------|------------|
| | 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 | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | ✓ |
| 30386597 | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | ✓ |
| 30386599 | | | ✓ | ✓ | ✓ | | | | | | | | | ✓ |
| 30386737 | | | ✓ | ✓ | ✓ | ✓ | | | | | | | | ✓ |
| 30386734 | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | | | | ✓ |
| 30386733 | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | | | | ✓ |
| 30386736 | | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | | | | ✓ |
| 30386735 | | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | | | | ✓ |
| 30386739 | | | | | | ✓ | ✓ | | | | | | | ✓ |
| 30386740 | | | | | | | | ✓ | ✓ | | | | | ✓ |
| 30386731 | | | | | | | | | | ✓ | ✓ | ✓ | | ✓ |
| UNV 30386598 | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | ✓ |
| 30386730 | | | ✓ | ✓ | ✓ | | | | | | | | | ✓ |
| 30386732 | | | | | | | | | ✓ | ✓ | ✓ | | | ✓ |
| 17008708* | | | ✓ | ✓ | ✓ | | | | | | | | | ✓ |

* Rainin Classic

Pipette Stands

Storage and Protection

Keep your pipettes charged, organized and ready to use.



SmartStand

Intelligent, easy-to-use, for manual and electronic XLS+ pipettes, single or multichannel. Charges up to four E4s.

See page 50 for details.



Universal Carousel Stand

Handy rotating carousel stand for up to seven manual pipettes. Weighted base – won't tip over.



Hang-Ups™

Built-in magnets for ferrous surfaces, with adhesive disks for other surfaces.



Shelf Hang-Ups

Three Hang-Ups on a bracket for attachment to a shelf.

| | CATALOG No. | DESCRIPTION |
|----------------|-----------------|--|
| Pipette Stands | 30312897 | SmartStand intelligent stand w/Bluetooth® |
| | 17012879 | Electronic pipette power supply |
| | 17001255 | Universal Carousel Stand for seven pipettes |
| | 17003024 | Hang-Ups, magnetic, for three pipettes |
| | 17004992 | Shelf Hang-Ups for three pipettes |
| | 17006638 | E4 XLS/XLS+ adapters for Hang-Ups and Carousel Stand (3/pkg) |

Pipette 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+



| PIPETTE VOLUME | VOL | | INCREMENT μL | | ACCURACY | | PRECISION | |
|--------------------|--------------------|--------|-------------------------|------|---------------------|------|----------------------|--|
| | VOLUME | MANUAL | ELECTRONIC | % | $(\pm) \mu\text{L}$ | % | $(\leq) \mu\text{L}$ | |
| | | | | | | | | |
| 2 μL | 0.2 μL | 0.002 | n/a | 12.0 | 0.024 | 6.0 | 0.012 | |
| | 1 μL | | | 2.7 | 0.027 | 1.3 | 0.013 | |
| | 2 μL | | | 1.5 | 0.030 | 0.7 | 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 | 0.6 | 0.03 | |
| | 10.0 μL | | | 1.0 | 0.1 | 0.4 | 0.04 | |
| 20 μL | 2 μL | 0.02 | 0.02 | 7.5 | 0.15 | 2.0 | 0.04 | |
| | 10 μL | | | 1.5 | 0.15 | 0.5 | 0.05 | |
| | 20 μL | | | 1.0 | 0.2 | 0.3 | 0.06 | |
| 100 μL | 10 μL | 0.2 | 0.1 | 3.5 | 0.35 | 1.0 | 0.1 | |
| | 50 μL | | | 0.8 | 0.4 | 0.24 | 0.12 | |
| | 100 μL | | | 0.8 | 0.8 | 0.15 | 0.15 | |
| 200 μL | 20 μL | 0.2 | 0.2 | 2.5 | 0.5 | 1.0 | 0.2 | |
| | 100 μL | | | 0.8 | 0.8 | 0.25 | 0.25 | |
| | 200 μL | | | 0.8 | 1.6 | 0.15 | 0.3 | |
| 300 μL | 30 μL | 0.5 | 0.2 | 2.5 | 0.75 | 1.0 | 0.3 | |
| | 150 μL | | | 0.8 | 1.2 | 0.25 | 0.375 | |
| | 300 μL | | | 0.8 | 2.4 | 0.15 | 0.45 | |
| 1000 μL | 100 μL | 2 | 1 | 3.0 | 3.0 | 0.6 | 0.6 | |
| | 500 μL | | | 0.8 | 4.0 | 0.2 | 1.0 | |
| | 1000 μL | | | 0.8 | 8.0 | 0.15 | 1.5 | |
| 2000 μL | 200 μL | 2 | 2 | 3.0 | 6.0 | 0.6 | 1.2 | |
| | 1000 μL | | | 0.8 | 8.0 | 0.2 | 2.0 | |
| | 2000 μL | | | 0.8 | 16.0 | 0.12 | 2.4 | |
| 5000 μL | 500 μL | 5 | 5 | 2.4 | 12.0 | 0.6 | 3.0 | |
| | 2500 μL | | | 0.6 | 15.0 | 0.2 | 5.0 | |
| | 5000 μL | | | 0.6 | 30.0 | 0.16 | 8.0 | |
| 10 mL | 1 mL | 20 | 10 | 5.0 | 50.0 | 0.6 | 6.0 | |
| | 5 mL | | | 1.0 | 50.0 | 0.2 | 10.0 | |
| | 10 mL | | | 0.6 | 60.0 | 0.16 | 16.0 | |
| 20 mL | 2 mL | 20 | 20 | 5.0 | 100.0 | 0.6 | 12.0 | |
| | 10 mL | | | 1.0 | 100.0 | 0.2 | 20.0 | |
| | 20 mL | | | 0.6 | 120.0 | 0.16 | 32.0 | |

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



| PIPETTE VOLUME | VOL | | INCREMENT μL | | ACCURACY | | PRECISION (MANUAL) | | PRECISION (ELECT) | |
|--------------------------------------|--------------------|---------------------|-------------------------|-------------------------|----------|--------------------------|--------------------|--------------------------|-------------------|--|
| | VOLUME | MANUAL / ELECTRONIC | | | | | | | | |
| | | | % | (\pm) μL | % | (\leq) μL | % | (\leq) μL | | |
| 10 μL | 1.0 μL | 0.02/0.01 | 4 | 0.04 | 5 | 0.05 | 3 | 0.03 | | |
| | 5.0 μL | | 1.5 | 0.075 | 1.5 | 0.075 | 0.8 | 0.04 | | |
| | 10.0 μL | | 1 | 0.1 | 0.5 | 0.05 | 0.5 | 0.05 | | |
| 20 μL | 2 μL | 0.02 | 7.5 | 0.15 | 4 | 0.08 | 3 | 0.06 | | |
| | 10 μL | | 1.5 | 0.15 | 1.5 | 0.15 | 1 | 0.1 | | |
| | 20 μL | | 1 | 0.2 | 0.5 | 0.1 | 0.3 | 0.06 | | |
| 50 μL | 5 μL | 0.05 | 3.5 | 0.18 | 2 | 0.1 | 1.5 | 0.075 | | |
| | 25 μL | | 1.2 | 0.3 | 0.5 | 0.125 | 0.4 | 0.1 | | |
| | 50 μL | | 0.8 | 0.4 | 0.4 | 0.2 | 0.3 | 0.15 | | |
| 200 μL | 20 μL | 0.2 | 2.5 | 0.5 | 1.2 | 0.24 | 1 | 0.2 | | |
| | 100 μL | | 0.8 | 0.8 | 0.25 | 0.25 | 0.25 | 0.25 | | |
| | 200 μL | | 0.8 | 1.6 | 0.3 | 0.6 | 0.2 | 0.4 | | |
| 300 μL | 30 μL | 0.5/0.2 | 2.5 | 0.75 | 1.5 | 0.45 | 1 | 0.3 | | |
| | 150 μL | | 0.8 | 1.2 | 0.3 | 0.45 | 0.25 | 0.375 | | |
| | 300 μL | | 0.8 | 2.4 | 0.25 | 0.75 | 0.2 | 0.6 | | |
| 1200 μL | 100 μL | 2/ 1 | 3.6 | 3.6 | 1 | 1 | 0.6 | 0.6 | | |
| | 600 μL | | 0.8 | 4.8 | 0.3 | 1.8 | 0.2 | 1.2 | | |
| | 1200 μL | | 0.8 | 9.6 | 0.2 | 2.4 | 0.15 | 1.8 | | |

Specifications subject to change without notice.

BenchSmart 96

Semi-Automated High-Throughput 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 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.



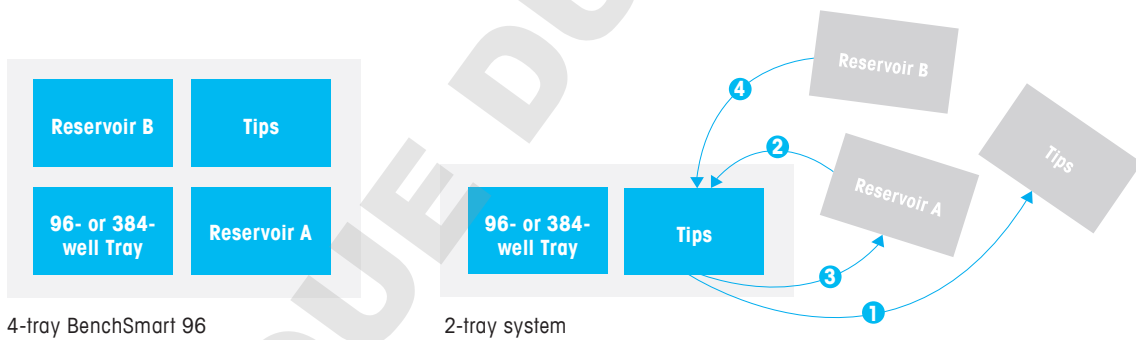
Save time and costs

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

| HEAD SIZE | LOW VOLUME 0.5-20 µL | MID VOLUME 5-200 µL | HIGH VOLUME 100-1000 µL |
|---|---|--|---|
| Channel Accuracy (Systematic Error) | 20 µL: ± 1% (0.2 µL) 10 µL: ± 1.2% (0.12 µL) 2 µL: ± 6% (0.12 µL) 1 µL: ± 12% (0.12 µL) | 200 µL: ± 1% (2 µL) 100 µL: ± 1% (1 µL) 20 µL: ± 2% (0.4 µL) 5 µL: ± 5% (0.25 µL) | 1000 µL: ± 1% (10 µL) 500 µL: ± 1% (5 µL) 100 µL: ± 2.5% (2.5 µL) |
| Channel Precision (Random Error) | 20 µL: ≤ 0.8% (0.16 µL) 10 µL: ≤ 1.0% (0.1 µL) 2 µL: ≤ 5% (0.1 µL) 1 µL: ≤ 10% (0.12 µL) | 200 µL: ≤ 0.4% (0.8 µL) 100 µL: ≤ 0.8% (0.8 µL) 20 µL: ≤ 1.5% (0.3 µL) 5 µL: ≤ 3.5% (0.18 µL) | 1000 µL: ≤ 0.4% (4 µL) 500 µL: ≤ 0.4% (2 µL) 100 µL: ≤ 1.25% (1.25 µL) |
| Volume Increments | 0.02 µL | 0.2 µL | 1 µL |

BenchSmart 96

Simplicity for Superior Performance

So intuitive, anyone in the lab can use it!

BenchSmart's wide range of application modes – from basic pipetting to advanced features like multi-dispense – make setup a snap.



BenchSmart's Application Modes Simplify Operation



Basic pipetting

Transfer individual liquid samples quickly, reproducibly and with minimal effort – everything you need for routine, everyday pipetting.



Advanced pipetting

Take greater control of your workflow by making fine adjustments – with advanced features like setting a fixed volume, volume sequencing and mixing.



Multi-dispense

Dispense multiple aliquots from a single aspirated volume – set a series of fixed volume aliquots or sequence of different volumes.



Dilute

Simplify in-tip dilution of multiple sample volumes with BenchSmart's fixed or volume sequencing features.



Reverse pipetting

Automates a procedure commonly used with viscous liquids – positioning the piston past the first stop, aspirating, then depressing only to the first stop to dispense the aliquot.

LTS

BenchSmart 96

| | CATALOG No. | MAX VOL | DESCRIPTION |
|---------------|-------------|---------|---|
| BenchSmart 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 |
| Acce | 17010394 | - | 384-well adapter plate stage, white |
| | 17010791 | - | 384-well adapter plate stage, black |

LTS

High-throughput LTS Tips

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

| CATALOG No. | VOL MAX VOLUME | QTY | | FEATURES | | | |
|---------------|-------------------|------------------------|-------------|---------------|--------|---------|---|
| | | RACKS/CARTON STACKS | TIPS/CARTON | PRESTERILIZED | FILTER | LOW RET | |
| Tips in Racks | 17011185 | 20 µL | 10 | 960 | | | |
| | 17011186 | 20 µL | 10 | 960 | ✓ | | |
| | 17011117 | 20 µL | 10 | 960 | ✓ | ✓ | |
| | 17010645 | 200 µL | 10 | 960 | | | |
| | 17010647 | 200 µL | 10 | 960 | ✓ | | |
| | 17010646 | 200 µL | 10 | 960 | ✓ | ✓ | |
| | 30281704 | 1000 µL | 10 | 960 | | | |
| | 30296781 | 1000 µL | 10 | 960 | ✓ | | |
| | 30296782 | 1000 µL | 10 | 960 | ✓ | ✓ | |
| | 17014399 | 20 µL | 10 | 960 | ✓ | | ✓ |
| | 17014400 | 20 µL | 10 | 960 | ✓ | ✓ | ✓ |
| | 17014401 | 200 µL | 10 | 960 | ✓ | | ✓ |
| | 17014402 | 200 µL | 10 | 960 | ✓ | ✓ | ✓ |
| | 30296783 | 1000 µL | 10 | 960 | ✓ | | ✓ |
| | 30296784 | 1000 µL | 10 | 960 | ✓ | ✓ | ✓ |
| | Tips in Stacks | 17011187 | 20 µL | 10 | 960 | | |
| 17011287 | | 20 µL | 10 | 960 | ✓ | | |
| 17010648 | | 200 µL | 10 | 960 | | | |
| 17010649 | | 200 µL | 10 | 960 | ✓ | | |
| 17014403 | | 20 µL | 10 | 960 | ✓ | | ✓ |
| 17014404 | | 200 µL | 10 | 960 | ✓ | | ✓ |

Liquidator 96

Manual High-Throughput Pipetting

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

- **Two volume ranges: 0.5-20 μ L and 5-200 μ L**
- **No power or programming: simply set the volume and pipette**
- **Four-position platform: process up to 3 plates at a time with no stacking**

A fast and highly intuitive pipetting system. Liquidator™ 96 streamlines application workflows for genomics, proteomics and cellular applications, simplifies plate replication, performs serial dilutions, plate washes or quickly moves samples between 96 and 384 well formats.

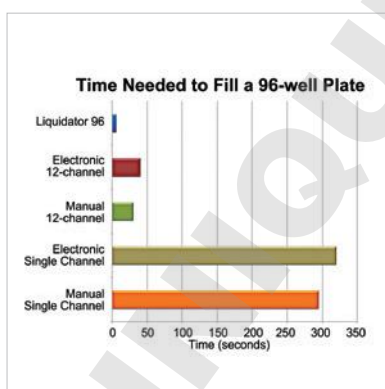
Count on Liquidator 96 to deliver the highest accuracy for PCR, qPCR, DNA sequencing and genotyping experiments. Generate precise 96-well ELISA, functional, cell viability or chemotaxis assays, all on one platform.





• Increase speed

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.

Accurate and reproducible

Both 20 μL and 200 μL Liquidator models offer superior accuracy and precision.

Liquidator 96 specifications

| | ACCURACY | PRECISION |
|------------------|--------------------------------|---------------------------------|
| 20 μL | 20 μL : $\pm 1.0\%$ | 20 μL : $\leq 0.8\%$ |
| | 10 μL : $\pm 1.2\%$ | 10 μL : $\leq 1.0\%$ |
| | 2 μL : $\pm 6\%$ | 2 μL : $\leq 5\%$ |
| | 1 μL : $\pm 12\%$ | 1 μL : $\leq 10\%$ |

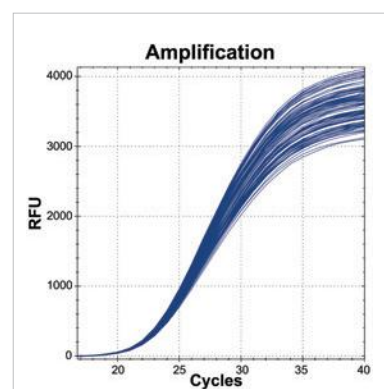
Volume range: 0.5-20 μL

Volume increment: 0.02 μL

| | | |
|-------------------|---------------------------------|----------------------------------|
| 200 μL | 200 μL : $\pm 1.0\%$ | 200 μL : $\leq 0.5\%$ |
| | 100 μL : $\pm 1.0\%$ | 100 μL : $\leq 0.8\%$ |
| | 20 μL : $\pm 2.0\%$ | 20 μL : $\leq 1.5\%$ |
| | 5 μL : $\pm 5.0\%$ | 5 μL : $\leq 3.5\%$ |

Volume range: 5-200 μL

Volume increment: 0.2 μL



Reduce errors

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

Liquidator 96

Liquidator 96

LTS

| | CATALOG No. | DESCRIPTION |
|---------------|-----------------|-------------------------------------|
| LIQ 96 | 17014207 | 0.5-20 µL Benchtop Pipetting System |
| | 17010335 | 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.

| LIQ 96 Accessories | CATALOG No. | DESCRIPTION |
|---------------------------|-----------------|---|
| | 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 |
| | 17011119 | 20 µL tip tray adapter, black |

High-throughput LTS Tips

LTS

| | CATALOG No. | VOL | | QTY | | FEATURES | | |
|-----------------------|-----------------|------------|--------------|--------|-------------|---------------|--------|---------|
| | | MAX VOLUME | RACKS/CARTON | STACKS | TIPS/CARTON | PRESTERILIZED | FILTER | LOW RET |
| Tips in Racks | 17011185 | 20 µL | 10 | | 960 | | | |
| | 17011186 | 20 µL | 10 | | 960 | ✓ | | |
| | 17011117 | 20 µL | 10 | | 960 | ✓ | ✓ | |
| | 17010645 | 200 µL | 10 | | 960 | | | |
| | 17010647 | 200 µL | 10 | | 960 | ✓ | | |
| | 17010646 | 200 µL | 10 | | 960 | ✓ | ✓ | |
| | 17014399 | 20 µL | 10 | | 960 | ✓ | | ✓ |
| | 17014400 | 20 µL | 10 | | 960 | ✓ | ✓ | ✓ |
| | 17014401 | 200 µL | 10 | | 960 | ✓ | | ✓ |
| | 17014402 | 200 µL | 10 | | 960 | ✓ | ✓ | ✓ |
| Tips in Stacks | 17011187 | 20 µL | | 10 | | | | |
| | 17011287 | 20 µL | | 10 | | ✓ | | |
| | 17010648 | 200 µL | | 10 | | | | |
| | 17010649 | 200 µL | | 10 | | ✓ | | |
| | 17014403 | 20 µL | | 10 | | ✓ | | ✓ |
| | 17014404 | 200 µL | | 10 | | ✓ | | ✓ |

High-throughput LTS tips are for use with Rainin BenchSmart 96 and Liquidator 96 benchtop pipetting systems only.

Liquidator 96 reservoirs, plates, mats and strips

Reusable
SBS footprint
polypropylene
reservoirs

| | CATALOG No. | | DESCRIPTION | |
|------------|-------------|-------------|---------------------------------------|---------------------|
| Reservoirs | 17012602 | Non-sterile | Low-profile 96 pyramidal bottoms | 5-pack |
| | 17012603 | Sterile | Low-profile 96 pyramidal bottoms | 5-pack, indiv. wrap |
| | 17012604 | Non-sterile | Standard profile 96 pyramidal bottoms | 5-pack |
| | 17012605 | Sterile | Standard profile 96 pyramidal bottoms | 5-pack, indiv. 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, indiv. wrap |
| | 17012612 | Non-sterile | Low-profile 12-channel V-bottom | 5-pack |
| | 17012613 | Sterile | Low-profile 12-channel V-bottom | 5-pack, indiv. wrap |
| | 17012610 | Non-sterile | Standard profile 12-channel V-bottom | 5-pack |
| | 17012611 | Sterile | Standard profile 12-channel V-bottom | 5-pack, indiv. wrap |

Deepwell
plates, mats,
tube strips,
cap strips

| | | | | |
|-------------|----------|-------------|--|-----------------------------|
| Accessories | 17012623 | Non-sterile | 2.2 mL 96-deepwell plate, | 5-pack |
| | 17012624 | Sterile | 2.2 mL 96-deepwell plate, | 5-pack, indiv. wrap |
| | 17012625 | Non-sterile | Polymer sealing mat fits 96-deepwell plate | 5-pack |
| | 17012626 | Sterile | Polymer sealing mat fits 96-deepwell plate | 5-pack, indiv. wrap |
| | 17012627 | Non-sterile | 1.2 mL racked microtube strips (8x12) | 5-pack |
| | 17012628 | Sterile | 1.2 mL racked microtube strips (8x12) | 5-pack |
| | 17012629 | Non-sterile | Microtube 8-cap strips, box of 300 | |
| | 17012630 | Sterile | Microtube 8-cap strips, box of 300 | 25 indiv. bags of 12 strips |

Enhance ELISA Data Quality

ELISA data quality can be significantly improved if reagents are added simultaneously and process time is reduced. Our free white paper shows how Liquidator™ 96 used for ELISA workflows is able to generate more linear ELISA standard curves.

Get your free white paper "Improving Quantitative ELISA Data" at:

► tinyurl.com/liq96elisa



PureSpeed Sample Preparation

Simplify Your Workflow

PureSpeed™ tips radically simplify purification of biomolecules, including recombinant and native proteins. This innovative approach produces the highest concentration of purified biomolecules, allowing for many options for downstream functional assays.

When used in conjunction with Rainin E4 XLS+ electronic pipettes, PureSpeed becomes a powerful, semi-automated purification system. And, unlike gravity-flow affinity columns, spin columns, magnetic beads and loose resins, PureSpeed's unique process draws sample repeatedly over a low dead volume packed resin bed. The result: higher controlled contact time with the resin and higher efficiency binding.

E4 XLS+

The E4 XLS+ electronic pipette automatically controls the purification process so you don't have to.



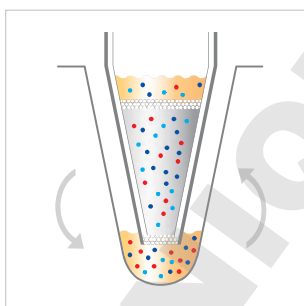
See PureSpeed

www.mt.com/purespeed



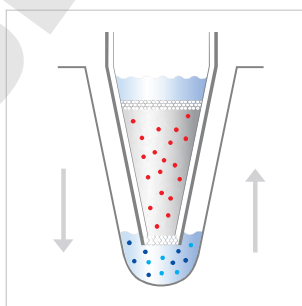
Expand Your Applications with PureSpeed

- Mass spec sample preparation
- Target expression screening
- Protein-protein interactions
- Immunoprecipitation assays
- Purification screening
- Biomarker discovery
- Biomarker validation
- Library screening & selection
- Structural analysis
- Immunogenicity
- Chromatin immunoprecipitation



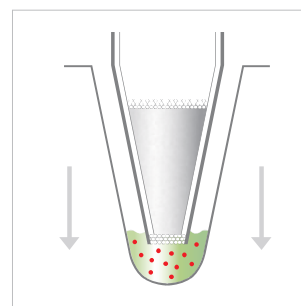
Capture

Sample is aspirated into the tip and the target biomolecule binds to the resin contained in the tip. The sample is drawn through the resin repeatedly to allow binding to reach equilibrium.



Purify

Similar to the capture step, multiple repetitive wash steps remove non-specific biomolecules and contaminants. The concentrated target biomolecules remain bound to the resin.



Enrich

Drawing the elution buffer repeatedly through the tip removes the concentrated target biomolecule from the resin into a fresh sample well. A minimal elution buffer volume is required, producing the highest concentration possible.

PureSpeed Applications

Simplify Proteomic and Genomic Experiments

PureSpeed sample preparation tips can streamline many types of experiments. Here are some examples.

Desalting mass spectrometry samples

PureSpeed C18 Desalting Tips offer the highest peptide capacity, 10 µg, which is critical for generating high-intensity sample spectra during mass spectrometry.

PureSpeed is an affordable, automated solution for purifying up to 12 samples at once, facilitating collection of high-quality sequence coverage data.

Immunoprecipitation

PureSpeed ProA and ProG pre-packed tips can be used with Rainin E4 XLS pipettes to perform direct and indirect immunoprecipitation. Compared to magnetic beads and loose agarose resin, PureSpeed offers a simpler protocol and delivers more concentrated immunoprecipitated sample.

With multichannel E4 XLS pipettes, PureSpeed can process up to 12 samples simultaneously.

Chromatin immunoprecipitation (ChIP)

Use PureSpeed to study the interactions between proteins and DNA in a cell. Unlike magnetic beads, loose agarose resin, spin columns and fixed staphylococcus cells, PureSpeed markedly reduces the hands-on time needed for ChIP.

For ChIP procedures, pre-packed ProA and ProG tips are able to produce highly concentrated samples. When used with the multichannel Rainin E4 XLS pipette, PureSpeed tips offer a truly parallel solution for ChIP experiments.

Recombinant and native protein purification

PureSpeed can simplify your method to capture, purify, and enrich recombinant proteins and native proteins, such as antibodies. Ni-IMAC, ProA and ProG resins can be completely saturated with recombinant proteins or antibodies.

Combined with high volume wash steps and low elution buffer volumes, PureSpeed delivers the highest concentration of purified material in as little as 15 minutes.

Ion exchange chromatography

Using the inexpensive and semi-automated PureSpeed system, it is easy to separate biomolecules based on their overall charge characteristics. Proteins, oligonucleotides, and other molecules can be resolved and purified using our pre-packed strong and weak anion and cation exchange tips.



Tips and Accessories

200 μ L pipettes are used with 200 μ L tips with 5 and 20 μ L resins.

1200 μ L pipettes with 1200 μ L tips with 20 and 80 μ L resins.

LTS

| | CATALOG No. | RESIN VOLUME | DETAILS | |
|-----------------------|---------------------------|---|---------------|-------------------|
| ProA Tips | 17012561 | 5 μ L | | 12 x 200 μ L |
| | 17012562 | 20 μ L | | 12 x 200 μ L |
| | 17012568 | 20 μ L | | 12 x 200 μ L |
| | 17012569 | 80 μ L | | 12 x 200 μ L |
| ProG Tips | 17012563 | 5 μ L | | 12 x 200 μ L |
| | 17012564 | 20 μ L | | 12 x 200 μ L |
| | 17012570 | 20 μ L | | 12 x 200 μ L |
| | 17012571 | 80 μ L | | 12 x 200 μ L |
| NI-IMAC Tips | 17012566 | 5 μ L | | 12 x 200 μ L |
| | 17012567 | 20 μ L | | 12 x 200 μ L |
| | 17012572 | 20 μ L | | 12 x 200 μ L |
| | 17012573 | 80 μ L | | 12 x 200 μ L |
| Ab+ Tips | 30382178 | 20 μ L | | 12 x 1000 μ L |
| | 30382179 | 80 μ L | | 12 x 1000 μ L |
| Ion Exchange Tips | 17014190 | 20 μ L | Weak Cation | 12 x 1000 μ L |
| | 17014191 | 80 μ L | Weak Cation | 12 x 1000 μ L |
| | 17014186 | 20 μ L | Weak Anion | 12 x 1000 μ L |
| | 17014187 | 80 μ L | Weak Anion | 12 x 1000 μ L |
| | 17014188 | 20 μ L | Strong Cation | 12 x 1000 μ L |
| | 17014189 | 80 μ L | Strong Cation | 12 x 1000 μ L |
| | 17014184 | 20 μ L | Strong Anion | 12 x 1000 μ L |
| | 17014185 | 80 μ L | Strong Anion | 12 x 1000 μ L |
| LTS Desalting Tips | 17014043 | LTS tips | | 12 x 20 μ L |
| | 17014045 | LTS tips | | 96 x 20 μ L |
| | 17014047 | LTS tips | | 960 x 20 μ L |
| C18 Desalting Tips | 17014044 | Universal tips | | 12 x 10 μ L |
| | 17014046 | Universal tips | | 96 x 10 μ L |
| | 17014048 | Universal tips | | 960 x 10 μ L |
| PureSpeed Accessories | 17012588 | Accessory Kit: Base, SD card, 96-deepwell plate, ColorTrak Guides, Adapters | | |
| | 17012584 | PureSpeed Base | | in PT-ACC |
| | 17012587 | E4 XLS+ Micro SD Card with PureSpeed protocol | | in PT-ACC |
| | 17012582 | Pack of 10 adapters, for 200 μ L multichannel | | in PT-ACC |
| | 17012583 | Pack of 10 adapters, for 1000 μ L multichannel | | in PT-ACC |
| | 17013242 | Adapter for 200 μ L single channel | | in Starter Kit |
| | 17013226 | Adapter for 1000 μ L single channel | | in Starter Kit |
| 17012623 | 96-deepwell plate, 5-pack | | in PT-ACC | |

UNV



Electronic and Manual Repeaters

AutoRep E and AutoRep S

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

AutoRep S

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

Useful when working in the range from 2 µL to 50 mL, AutoRep S is an economical choice for repeat dispensing up to 49 aliquots without refilling.

The volume reference card and central volume wheel simplify volume setting. The two-sided volume card fits in a slot on the instrument head.

AutoRep E

AutoRep E virtually eliminates all pipetting forces – a real concern with repeat pipetting. When used with Encode syringes, AutoRep E automatically senses and displays the tip volume.

Three modes:

- **Dispensing:** step counter displays volume
- **Auto dispensing:** learns your pace, so no need to program time intervals
- **Pipetting:** positive displacement

The no-memory/no-maintenance NiMH power pack charges in just three hours.



AutoRep S

AutoRep E

| | CATALOG No. | DESCRIPTION | |
|---------------------------|-------------|-------------|---|
| AutoRep Repeater Pipettes | 17000723 | AutoRep E | Electronic repeater pipette, 1 µL – 50 mL |
| | 17000556 | AutoRep E | Charger adapter |
| | 17003233 | AutoRep E | NiMH battery pack |
| | 17004324 | AutoRep E | Charging base |
| | 17013008 | AutoRep S | Manual repeater pipette, 2 µL to 50 mL |
| | 17013009 | AutoRep S | Shelf mount |
| | 17013010 | AutoRep S | Volume table |

Encode positive displacement syringes are ideal for repetitive pipetting of all liquids.

Encode syringes

AutoRep E displays syringe volume automatically, eliminating errors and guesswork. The wide selection of Encode™ syringes gives accurate delivery in any volume from 1 µL to 50 mL, and they are available sterile and non-sterile.

Sterile syringes are certified to be free of detectable DNA, RNase, Endotoxin and ATP. Product is sterilized with beta-radiation to obtain a SAL of 10⁻⁶. Individually wrapped.

| CATALOG No. | DESCRIPTION | | |
|-----------------|--|-------------|---------|
| 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 |
| 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 |
| 17001885 | Encode set, non-sterile, 20 each: 0.5, 1.0, 1.25, 2.5, 5, 10, 12.5 mL | | |
| 17000546 | 25/50 mL** | 10/pkg | |
| 17000547 | 25/50 mL** Wrapped | 5/pkg | Sterile |

* Includes one adapter. ** Adapter



Large Volume Liquid Handling

Disp-X – Dispense Safely and Easily

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

Superior chemical compatibility

High-grade inert materials assure 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 | |

Precise Control at Your Fingertips

Pipet-X – Pipette Volumes to 100 mL

Ample flexibility for a wide range of liquid transfer and measurement options.

One tool is all you need

The Pipet-X pipet controller excels at all serological pipetting applications; uses standard plastic or glass serological pipets.

One-handed control

The ergonomic grip and buttons are designed for comfort with large or small hands.

Smart recharging

Pipet-X uses a rechargeable NiMH battery for up to eight hours of uninterrupted use. Can be used while recharging with power cord.

Contamination free

Built-in check valve and 0.2 micron hydrophobic membrane filter protect the Pipet-X internal components from contamination during aspiration.



| | CATALOG No. | DESCRIPTION |
|---------|-------------|--|
| Pipet-X | 17011733 | Pipet-X pipet controller, 0.1–100 mL |
| | 17011744 | Pipet-X silicone adapter with check valve |
| | 17011745 | Pipet-X spare membrane filter: 0.2 µm, sterile |
| | 17011746 | Pipet-X nickel-metal hydride battery |

Stop Pipette Failures Before They Occur

Restore Pipettes to Their Original Condition

Rainin performance maintenance plans target the needs of all labs.

Why do pipettes need routine service?



Seals

Seals are most prone to wear and will perform without leaking for up to a year or more.



Pistons

Piston surfaces deteriorate, especially when using corrosive or aggressive samples.

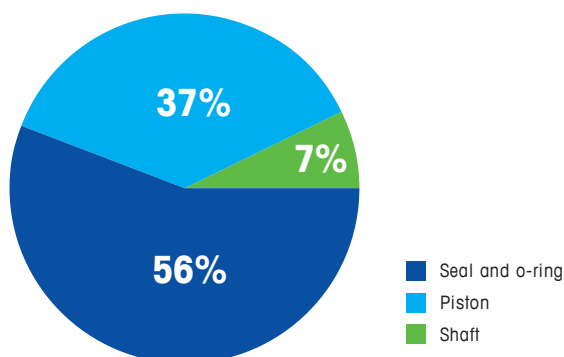


Shafts

Shaft ends can wear or get damaged, particularly if excessive force is used to mount tips.

Sealing system failures

As found service data on more than 120,000 pipettes (all brands) show the relative frequency with which sealing system components fail.



Get Better Results!

GPP – Good Pipetting Practice

Improve your data quality with Good Pipetting Practice™ (GPP™) – METTLER TOLEDO's comprehensive, systematic approach to maximizing pipetting accuracy and repeatability.

Apply the principles of GPP in your lab and everyone on your team will:

- Understand the array of liquid handling instruments and options available
- Know how to optimize their workflow for each of the liquid handling steps involved
- Gain the range of pipetting skills necessary to produce reliable data
- Appreciate how ergonomics can influence data production and their own well being
- Recognize the risk associated with out-of-calibration pipettes and the role of routine checks vs. professional service.



Specification in this publication are subject to change without notice.

METTLER TOLEDO trademarks: Rainin, Pipetting 360° and the 360° logo LTS, LiteTouch, Pipet-Lite, E4, XLS, XLS+, BenchSmart, Liquidator, SmartStand, EasyDirect, Rainin Classic, Pos-D, AutoRep, Disp-X, Pipet-X, PureSpeed, TerraRack, TerraBase, BioClean, BioClean Ultra, Green-Pak, SpaceSaver, StableStak, StableRak, Hang-Ups, ShaftGard, GPP and Good Pipetting Practice.

Pipelman is a registered trademark of Gilson Inc. The Bluetooth word mark is a registered trademark of Bluetooth SIG, Inc.

17700924/EN

Your Pipettes Are Assets Manage Them That Way!

EasyDirect Pipette Management Software with SmartStand – a simple, yet sophisticated system to track and manage your valuable pipette inventory.

- Identify pipettes due for calibration/service
- Manage quick checks between regular calibration intervals
- Know the number and location of all your pipettes (regardless of brand!)
- Read pipette service data – right at the bench
- Link multiple data locations via Bluetooth® wireless technology

Whether you're part of a large pharmaceutical research organization or a medium-sized academic lab, EasyDirect software integrated with SmartStand creates a flexible, scalable pipette management and tracking environment that easily adapts to your specific needs and SOPs.



- Never miss another calibration interval
- Reduce the time and resources required to manage calibration data
- Know the location of every pipette in a lab or your entire organization
- Make pipette data readily available in a single, centralized database
- One EasyDirect software license is included with every SmartStand

SmartStand + EasyDirect = Easy Pipette Management

SmartStand

- Reads the data stored on your pipette
- Provides pipette calibration/service status right at your bench
- Quick charges Rainin electronic E4 XLS and XLS+ pipettes
- Stands alone or mounts to a wall or shelf



EasyDirect Pipette Asset Management

- Manages all of your pipette data
- Creates reports for printing and exports data for other applications
- Links to multiple SmartStands via Bluetooth
- Easily adapts and expands to meet your needs

| | CATALOG No. | DESCRIPTION |
|------------|-------------|---|
| SmartStand | 30312897 | SmartStand stand with EasyDirect software |
| | 30312899 | Fastening kit – magnetic |
| | 30313000 | Fastening kit – shelf |
| | 30313247 | Fastening kit – bracket |
| | 17012879 | Electronic pipette power supply |
| | 30381929 | EasyDirect – Pipette Asset Management (PAM) software, basic license |
| | 30449204 | SmartStand USB Bluetooth/Adapter |

FREE Technique Posters!

Reliable results require quality pipettes and tips – and the right pipetting techniques for a given application. Rainin technique posters are a great way to remind your research team to optimize their workflows and practice good ergonomics.



Other Rainin technique posters include:

Stretch! • Get Better Results • Bench Posture – It Matters! • Quick Check

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