Product Catalog
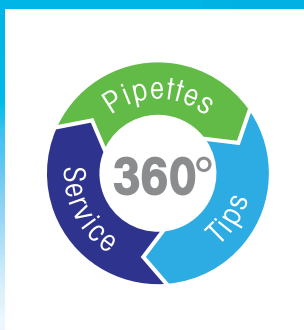
2020

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

Pipettes
Service
360°
Tips

Pipettes, Tips and Service

Quality Products for Superior Performance

METTLER TOLEDO

Introducing EasyDirect 2.0

Pipette Management Simplified!

With EasyDirect™ Pipette Asset Management software and Rainin SmartStand, you have a powerful pipette tracking and calibration management system.

Using the RFID chip embedded in every Rainin XLS-brand pipette, EasyDirect tracks a pipette's usage, location and calibration data automatically.

- Manage an unlimited number of pipettes – across labs and locations
- Track all pipettes automatically
- Simplify calibration management and repairs
- Receive and manage calibration certificates electronically

With EasyDirect, you're always audit ready!

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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.

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.

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

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

Pipettes
Rainin pipettes offer exceptional performance, comfort and durability.

LTS — 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.

GPP — Good Pipetting Practice
Free assessment tools and onsite training to build your team's pipetting skills.

Pipette Management
Our EasyDirect 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.

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

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.

- 50% Less Plastic
- Locking Latch
- Hinged Lid
- BioClean Ultra

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

`LTS` CATALOG No.	VOL MAX VOLUME	QTY RACKS/CARTON	TIPS/CARTON	STERILIZED	SHAFTGARD	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 Racks

Fast loading
Robust secure racks make tip loading easy

Autoclavable
Two-position lid for efficient sterilization

Format options
Standard, sterilized and filter versions available

Protective
Safe from dirt and contamination

RAININ
10 µL BioClean Ultra™
LTS Sterilized
PN X0389228 Batch 1737 219010

METTLER TOLEDO

UNV

	CATALOG No.	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	SHAFTGARD	WIDE-O	FILTER
Hinged-Lid Racks	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	✓			

The table headers are grouped: VOL (MAX VOLUME), QTY (RACKS/CARTON, TIPS/CARTON), FEATURES (STERILIZED, SHAFTGARD, WIDE-O, FILTER)

Wide-O = Wide Orifice

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. 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

Rack base not included with Green-Pak SpaceSaver. See page 11 for empty racks.

	CATALOG No.	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	WIDE-O	LOW RET	FILTER
Hinged-Lid Racks	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	✓		✓	✓
SpaceSaver	30389296	20 µL[1]	10	960			✓	
	30389298	20 µL[1]	10	960	✓		✓	
	30389300	200 µL[2]	10	960			✓	
	30389302	200 µL[2]	10	960	✓		✓	
	30398985	300 µL	8	768	✓		✓	
	30389293	1000 µL	8	768			✓	
	30389295	1000 µL	8	768	✓		✓	
Bulk	17014340	20 µL		1000			✓	
	17014341	200 µL		1000			✓	
	17014342	1000 µL		1000			✓	

VOL | QTY | FEATURES

Residue with Rainin Standard — 10 µL tip after dispensing

Residue with Rainin Low Retention — 10 µL tip after dispensing

UNV

Rack base not included with Green-Pak SpaceSaver. See page 11 for empty racks.

Type	CATALOG No.	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	SHAFTGARD	WIDE-O	LOW RET	FILTER
Hinged-Lid Racks	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	✓			✓	✓
SpaceSaver	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	✓			✓	
Bulk	17014395	10 µL		1000				✓	
	17014396	10 µL		1000	✓			✓	
	17014397	250 µL		1000				✓	
	17014398	1000 µL		1000				✓	
	17015068	1000 µL		1000			✓		

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

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.

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

Fast
Refill a rack
in seconds

Clean
Protects tips from
contamination

Convenient
Dispensing sleeve
is easy to use

Save space
Each sleeve contains
8 or 10 refills

Green-Pak Individually sealed refills

Filter tips
A great refill option
for filter tip users

Clean
Each refill is
completely sealed

Easy
Load refills without
touching the tips

Eco-sensitive
Protective shell made
from recycled PETE

Recycled PET!

Rainin

	CATALOG No.	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	SHAFTGARD	FILTER
Spacesaver (LTS)	30389291	20 µL¹	10	960			
	30389297	20 µL¹	10	960	✓		
	30389299	200 µL²	10	960			
	30389301	200 µL²	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 µL¹	10	960			
	30389275	20 µL¹	10	960	✓		
	30389274	20 µL¹	10	960	✓		✓
	30389277	200 µL²	10	960			
	30389278	200 µL²	10	960	✓		
	30389276	200 µL²	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 (UNV)	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	✓		✓
	30389262	100 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				

Empty rack base not included with Green-Pak SpaceSaver

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

BioClean Ultra™

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 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 pre-sterilized, eliminating the need to autoclave. Many volume sizes available in both LTS [LTS] and universal [UNV] formats.

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.

Sterilized

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

	CATALOG No.	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	PRESTERILIZED	SHAFTGARD	FILTER
		VOL		QTY	FEATURES		
LTS TerraRack	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	✓		✓
UNV TerraRack	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	✓		✓

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™

Double-96 Racked Tips
StableStak and StableRak

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

Ultra Pure
Now
BioClean Ultra!

- Higher purity standard
- Same great tip!
- Updated colors

StableStak™

Stacked double-96 racks with 192 tips per layer.

StableRak™

Individual double-96 racks with 192 tips per layer.

Formats

Standard, presterilized and filter versions available

Protective

Keeps tips safe from dirt and contamination

Fast loading

Sturdy, non-slip racks make tip loading easy

StableRak and StableStak

Bulk Tips
LTS and UNV formats

	CATALOG No.	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	PRESTERILIZED	FILTER	SHAFTGARD	WIDE-O
StableRak (LTS)	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	✓			
UNV	17005857	300 µL	4	768				
Bulk Tips (LTS)	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 (UNV)	17001124	10 µL		1000				
	17001123	10 µL		1000			✓	
	17001116	250 µL		1000				
	17001127	250 µL		1000				✓
	17001121	1000 µL		1000				
	17001125	2000 µL		1000				
	17001126	2500 µL		1000				
	17001117	5000 µL		1000				
	17001122	10 mL		200				
	17005939*	10 mL		75	✓			

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

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™ 10µL 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.

UNV

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 — Hinged-Lid Racks

CATALOG No.	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	WIDE-O	LOW RET	FILTER	X-LENGTH
30389251	200 µL²	8	768					✓
30389252	200 µL²	8	768	✓				✓
30389242	200 µL²	8	768	✓			✓	✓
30389222	1000 µL	8	768					✓
30389224	1000 µL	8	768	✓				✓
30389223	1000 µL	8	768	✓			✓	✓
30389247	200 µL²	10	960		✓			
30389248	200 µL²	10	960		✓	✓		
30389249	200 µL²	10	960	✓	✓			
30389250	200 µL²	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.	MAX VOLUME	RACKS/CARTON	TIPS/CARTON	STERILIZED	GEL-WELL	SHAFTGARD	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,				

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

BioClean Ultra

The Gold Standard for Tip Purity and Performance

Rainin carefully tests and certifies each batch of BioClean Ultra™ pipette tips, so researchers can have absolute confidence in the integrity of their experiments and the fidelity of their data.

BioClean Ultra™

Guaranteed Purity

- The industry's most comprehensive testing protocol.
- 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.

▶ Learn more about BioClean Ultra at **www.mt.com/BioCleanUltra**

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.

The LTS difference

LTS

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.

Small sealing ring
significantly reduces friction

Positive stop
prevents jamming

- 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.

Universal pipetting

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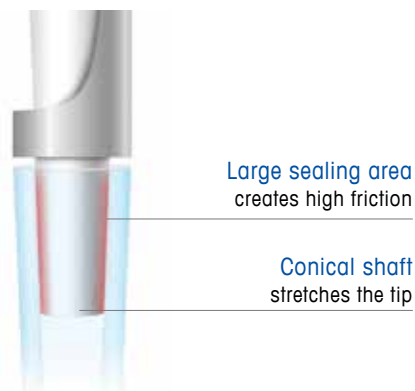
Universal pipettes have cone-shaped shafts that rely on friction to hold tips firmly.

Large sealing area
creates high friction

Conical shaft
stretches the tip

- 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. 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.

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 32.

• Advanced asset management

The RFID tag on board every Rainin XLS pipette stores calibration data that is electronically read by the Rainin SmartStand and EasyDirect software. See pages 57-58 for details.

• 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

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

Rainin LTS pipettes are designed for use with LTS tips.
For more information, see page 18.

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!

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 61.

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 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.

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.

GLP

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

E4 XLS+

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

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

E4 XLS+

Universal-Fit pipettes use universal tips.
Li-Ion battery and wall power supply are included.
For pipette specifications, see page 32.

XLS+ Multichannels

Performance You Can Feel!

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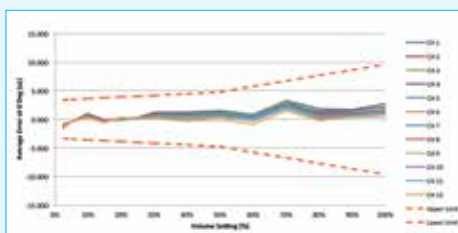
LTS

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+ Multichannel

Li-Ion battery and wall power supply are included.
For pipette specifications, see page 32.
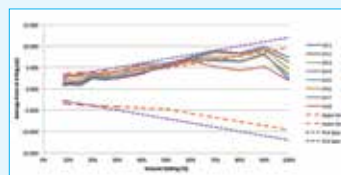Rainin multichannel pipettes are only available in LTS format.

Industry-leading Channel-to-Channel Consistency

There's a reason Rainin multichannel pipettes are the brand leader:
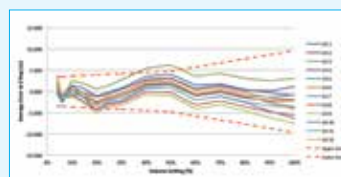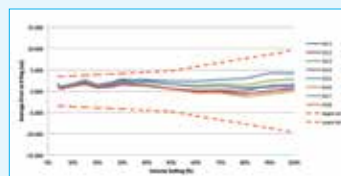ease-of-use and exceptional channel-to-channel consistency.

Competitor A • 1200uL

Rainin XLS+ 1200uL

VS.

Competitor B • 1200uL

Competitor C • 1200uL

Pipet-Lite XLS+ Manual Multichannel

Ergonomic design and exceptional performance

- Balanced, lightweight, lower 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

(Pipet-Lite XLS+ Multichannel)

Rainin LTS pipettes are designed for use with LTS tips.
For pipette specifications, see page 32.
Rainin multichannel pipettes are only available i...

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 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	**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.
For pipette specifications, see page 32.
Adjustable spacer pipettes are only available in LTS format.

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

E4 XLS

Rainin LTS pipettes are designed for use with LTS tips.
For pipette specifications, see page 32.
Adjustable spacer pipettes are only available in LTS format.

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. 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 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.

Great value – lower prices!

UNV

	CATALOG No.	VOLUME RANGE
Rainin Classic Universal Fit	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.
For pipette specifications, see page 32.

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 disposable syringe tips are packed in convenient racks.

No cross contamination
Positive displacement prevents aerosol formation and protects samples from contamination.

	CATALOG No.	VOL MAX VOLUME	QTY RACKS/CARTON	TIPS/CARTON	PRESTERILIZED
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			
Disposable Syringe Tips	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

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
- Available for LTS `LTS` and universal `UNV`

* See page 60-61 for more about SmartStand

	CATALOG No.	Single Channel Manual						Multichannel Manual				Single Channel Electronic			
		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	SmartStand
LTS	30386738	✓	✓	✓	✓										✓
	30386597	✓		✓	✓	✓									✓
	30386599			✓	✓	✓									✓
	30386737				✓	✓	✓								✓
	30386734			✓	✓	✓		✓							✓
	30386733			✓	✓	✓			✓						✓
	30386736			✓	✓	✓				✓					✓
	30386735			✓	✓	✓					✓				✓
	30386739							✓	✓						✓
	30386740									✓	✓				✓
	30386731											✓	✓	✓	✓
UNV	30386598	✓		✓	✓	✓									✓
	30386730			✓	✓	✓									✓
	30386732											✓	✓	✓	✓
	17008708*			✓	✓	✓									✓

* Rainin Classic

SmartStand + EasyDirect software = Easy Pipette Management

NEW!

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+

PIPETTE VOLUME	VOL VOLUME	INCREMENT µL MANUAL	INCREMENT µL ELECTRONIC	SYSTEMATIC ERROR (ACCURACY) %	SYSTEMATIC ERROR (ACCURACY) (±) µL	RANDOM ERROR (PRECISION) %	RANDOM ERROR (PRECISION) (≤) µL
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		

Single-channel pipettes

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

	VOL	INCREMENT µL	SYSTEMATIC ERROR (ACCURACY)		RANDOM ERROR – MANUAL (PRECISION)		RANDOM ERROR – ELECT (PRECISION)	
PIPETTE VOLUME	VOLUME	MANUAL / ELECTRONIC	%	(±) µL	%	(≤) µL	%	(≤) 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

Multichannel pipettes

Specification subject to change without notice.

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 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.
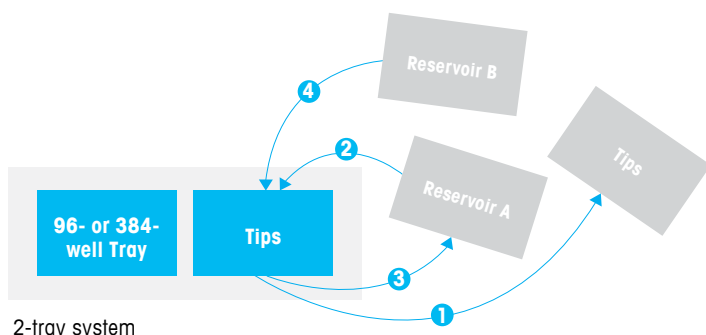
Speed your workflow

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
Performance Specifications	**Systematic Error** (Channel Accuracy)	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)
	Random Error (Channel Precision)	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.

BenchSmart 96

LTS

	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
	30321288	–	Terminal Conversion Kit

High-throughput LTS Tips

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

LTS

		VOL	QTY		FEATURES		
	CATALOG No.	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	✓	✓	
	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	✓		✓

See page 41 for BenchSmart reservoirs, plates, mats and

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 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 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.

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: ± 1.0%	20 µL: ≤ 0.8%
	10 µL: ± 1.2%	10 µL: ≤ 1.0%
	2 µL: ± 6%	2 µL: ≤ 5%
	1 µL: ± 12%	1 µL: ≤ 10%

Volume range: 0.5-20 µL
Volume increment: 0.02 µL

	ACCURACY	PRECISION
200 µL	200 µL: ± 1.0%	200 µL: ≤ 0.5%
	100 µL: ± 1.0%	100 µL: ≤ 0.8%
	20 µL: ± 2.0%	20 µL: ≤ 1.5%
	5 µL: ± 5.0%	5 µL: ≤ 3.5%

Volume range: 5-200 µL
Volume increment: 0.2 µL

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.
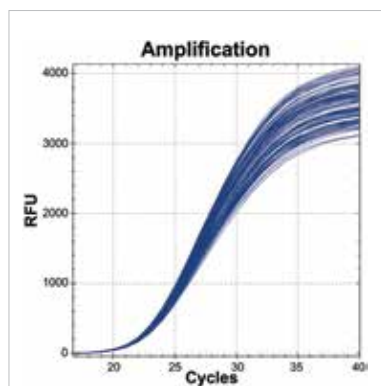
Reduce errors

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

Liquidator 96

Liquidator 96

	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.

	CATALOG No.	DESCRIPTION
LIQ 96 Accessories	**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

LTS

High-throughput LTS Tips

For use with BenchSmart 96 and Liquidator 96 benchtop pipettors only

	CATALOG No.	VOL MAX VOLUME	QTY RACKS/CARTON	QTY STACKS	TIPS/CARTON	FEATURES 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.

Reservoirs, plates, mats and strips for BenchSmart 96 and Liquidator 96

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

	CATALOG No.	DESCRIPTION		
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 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 samples.

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.

PureSpeed

200 µL pipettes are used with 200 µL tips with 5 and 20 µL resins.
1200 µL pipettes are used with 1200 µL tips with 20 and 80 µL resins.

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

Rainin QuickFlow
Convenient, Trouble-free Aspiration

The Rainin QuickFlow benchtop aspirator combines exceptional ergonomics with a broad range of features and conveniences– the ability to select continuous flow instead of maintaining pressure on the activator button, a liquid-level sensor to prevent overfilling and multiple adapters for most media types. Labs with central vacuum systems can purchase the handle and adapter kit separately.

NEW

Features

- Ergonomic design
- Simple and safe to use
- Small footprint
- Fits under cell culture hoods
- Interchangeable adapters
- Variable speed vacuum
- Non-contact liquid level sensor
- Snap connectors for easy assembly/disassembly
- Single- and multi-channel adapters use universal-fit tips

Perfect for aspirating media from 96-well plates
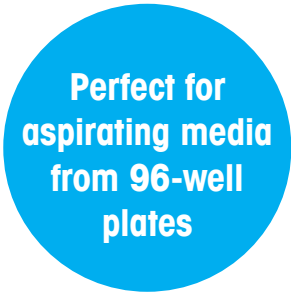
Status Indicator

Ordering Information

	CATALOG No.	DESCRIPTION
QuickFlow	30519826	Aspirator, QuickFlow 4L
	30519824	QuickFlow Handle Kit – Standard
	30519825	QuickFlow Handle Kit – w/Splitter

Easy Assembly

With self-sealing quick connectors, QuickFlow is designed for easy and intuitive disassembly and reassembly. All parts that come in contact with liquids are easy to clean and autoclavable.

Liquid Level Sensor

The QuickFlow's non-contact level sensor offers exceptional performance and reliability. The sensor stops the vacuum when the bottle reaches capacity and is proven to provide a long service life.

Speed Control

Continuous Flow

QuickFlow's continuous mode isn't just more efficient—it's a hand saver. Repeatedly pressing the aspiration button can contribute to repetitive strain injury. QuickFlow eliminates this problem by allowing users to select continuous flow and the amount of suction.

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 – US
	17003233	AutoRep E	NiMH battery pack
	17004324	AutoRep E	Charging base without charger adapter
	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

Encode Syringes

* 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
17011743	Pipet-X pipet controller (EU), 0.1–100 mL
17011733	Pipet-X pipet controller (US), 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

Pipet-X

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.
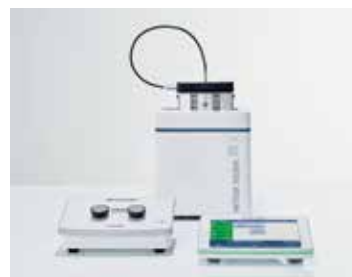
CuveT Thermostat for Precise Temperature Control

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**

SevenCompact™
Universal and Reliable Instruments

The SevenCompact™ series combines precise electrochemical measurement technologies with flexibility, innovative design and ease-of-use. It can be universally employed and continues the tradition of the Seven series from METTLER TOLEDO.

Large Customizable Color Display

The 4.3 inch high-resolution color display has large digits and well arranged icons making relevant information identifiable at a glance. The color and contrast can be adapted to your preferences and light conditions.

uFocus™ on the Essentials

The instrument gives you the choice! In the normal screen layout, all available information is visible. By switching to the uFocus™ distractions caused by less important information are eliminated.

uPlace™ the Sensor Perfectly

The uPlace™ electrode arm can be operated with one hand, moving straight up and down bringing the electrode into the position where it works best for your sample.

Total Flexibility with Data Processing

Upon endpointing, SevenCompact™ allows multiple archiving options: the data can be stored, printed or transferred to EasyDirect™. Any combination of these three options is possible, giving you total flexibility.

Intelligent Sensor Management for Highest Security

Upon connection of an ISM sensor, the sensor's ID is automatically identified. The most recent sensor calibration data is transferred to the meter and is used for subsequent measurements.

SevenCompact Duo for Truly Universal Measurements

The dual channel instrument measures conductivity and its derived values, as well as pH - either simultaneously or independently.

MODEL	PARAMETERS	MEASURING RANGE	RESOLUTION AND ACCURACY	INLAB® SENSOR	PAART No.
S220-Basic (Instrument)	pH/mV*/Redox/Ion concentration**/°C***	−2.000 … 20.000 pH −2000.0 … 2000.0 mV $1.00E^{-9}$ … $9.99E^{+9}$ −30.0 … 130.0 °C	pH: 0.001/0.01/0.1; ±0.002 mV: 0.1/1; ±0.1 Ions: last signifi.digit; ±0.5% °C: 0.1; ±0.1	none	**30019028**
S220-Kit				Expert Pro-ISM	**30019029**
S220-uMix				Expert Pro-ISM, uMix stirrer	**30096986**
S220-Buffers				InLab Expert Pro-ISM and Buffer Bottles	**30393277**
S220-Bio				Routine Pro-ISM	**30019031**
S220-Micro				Ultra-Micro-ISM	**30096985**
S220-U				Versatile Pro	**30019032**
S230-Basic (Instrument)	Cond./TDS/Salinity/ Resistivity/°C	0.001µS/cm … 1000 mS/cm −30.0 … 130.0 °C	0.001 … 1; ±0.5% 0.1 °C; ±0.1 °C	none	**30019033**
S230-Kit				731-ISM	**30019034**
S230-USP/EP				741-ISM	**30019035**
S213-Meter	pH/mV/Redox/ °C/Conductivity/ TDS/Salinity/ Resistivity	−2.000 … 20.000 pH −2000.0 … 2000.0 mV 0.001mS/cm 1000mS/cm (cond) −30.0 … 130.0 °C	pH: 0.001/0.01/0.1 ±0.002 mV: 0.1/1 ±0.1 Cond: 0.001 … 1 ±0.5% 0.1 °C; ±0.1 °C	none	**30339958**
S213-STD				Expert Pro-ISM 731-ISM	**30339959**
S213-Water				Pure Pro-ISM 741-ISM	**30339980**

*   Instrument can also measure rel. mV

** Ion concentration supports units mmol/L, mol/L, ppm, mg/L, % and pX

*** Temperature display choice between °C and °F. ATC temperature range is −5.0 … 130.0 °C

SevenCompact™

Seven good reasons for SevenCompact™

- **Top sensors**
  fast and accurate measurements
- **Menu guidance in 12 languages**
  user-friendly operation
- **Clear, well arranged color display**
  quick to learn
- **Many printing and data storage options**
  GLP compliant
- **Professional peripheral options**
  highly efficient
- **Intelligent sensors**
  peace of mind
- **Full fledged service offering**
  high uptime and compliance

General Accessories for SevenCompact™

DESCRIPTION	PART No.
uPlace™: Electrode holder (included in standard delivery)	**30019823**
uMix™ magnetic stirrer	**30040000**
Protective cover (included in standard delivery)	**30019824**
RS-P25 printer (with RS232 cable)	**11124320**
Barcode reader hand scanner	**21901297**
USB cable for barcode reader (not included with barcode reader)	**21901309**
EasyDirect pH Software	**30323214**
USB A-B cable 1.8m for LabX direct PC software (not included with LabX direct PC software)	**51191926**
Guide to pH measurement (included in kit versions)	**51300058**
Guide to conductivity measurement (included in kit versions)	**30099121**
Power supply (included in standard delivery)	**11120270**

▶ See SevenCompact in action. **www.mt.com/SevenCompact**

Trust the Service Experts
Minimize Risk and Maximize Reproducibility

The METTLER TOLEDO difference: controlled laboratory environments and manufacturer authorized spare parts, certified pipette technicians and specialized calibration software.

Americas

Uptime

Our global network of factory-trained technicians and ISO/IEC 17025 certified service labs enables us to respond quickly to all repair and calibration needs.

Performance

Environmentally controlled labs and original manufacturer spare parts ensure that instruments are always returned to the highest accuracy and precision.

Compliance

With specialized calibration software and ISO/IEC 17025 accredited labs, METTLER TOLEDO is a partner you can trust to help maintain ISO 8655 and FDA 21 CFR part 11 standards.

Expertise

Our certified pipette service technicians perform more than 10 million readings each year, giving us extraordinary data analytics for understanding how all brands of pipettes perform over time.

▶ Request Rainin Service today! **www.mt.com/RaininService**

Europe

Asia

● Mettler Toledo Sales and Service

METTLER TOLEDO operates the world's most extensive network of ISO/IEC 17025 accredited pipette calibration laboratories.

Comprehensive offering

- Calibration
- Preventive maintenance
- Service repair
- Calibration certificates

Global network

With a global network of ISO/IEC 17025 accredited laboratories and one of the largest factory-trained support and service forces, we can provide you with application support and technical assistance anytime, anywhere.

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 or ISO 8655 tolerances
- Calibration certificates with detailed results
- Calibration label

	Standard Plan Labs with basic service needs **Perfect for Academic Research R&D**	**Advanced Plan** When prior performance matters **Pharma Biotech Clinical** research labs	**Accredited Plan** For complete ISO 17025 documentation **GLP/GMP, Regulated Labs**
Preventive Maintenance	✔	✔	✔
As Found	n/a	4 test weighings @ 10% and 100%	4 test weighings @ 10%, 50% and 100%
As Returned	4 test weighings @ 10% and 100%	4 test weighings @ 10% and 100%	10 test weighings @ 10%, 50% and 100%
Calibration Certificates	Standard Certificate	Standard Certificate	ISO 17025 Certificate

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
Care for pipettes in the lab and know when to send pipettes for service.

Evaluation
Evaluate the variables, tolerances and other aspects of your application.

GPP™

5 Routine Operation

1 Evaluation

4 Calibration

2 Selection

3 Training

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

Calibration
Recognize the risks associated with out-of-calibration pipettes and learn how using Quick Check can help assess a pipette's accuracy between calibrations.

Training
Optimize workflows and improve outcomes with application-specific pipetting techniques. Also, learn how to minimize pipetting discomfort and injury through better ergonomics.

▶ See how much GPP has to offer at **www.mt.com/gpp**

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.

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 stand with EasyDirect 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

SmartStand
The Intelligent Pipette Stand

Easy-read color screen displays pipette status

Charges up to four E4 pipettes simultaneously

Fast RFID readers scan four pipettes at once

Detachable head mounts to wall or shelf

RAININ SmartStand

Built-in Bluetooth® and USB mini-port

METTLER TOLEDO

CATALOG No.	DESCRIPTION
30312897	SmartStand stand with EasyDirect basic software
30312899	Fastening kit – magnetic
30313000	Fastening kit – shelf
30313247	Fastening kit – bracket
17012879	Electronic pipette power supply
30449204	SmartStand USB Bluetooth/Adapter

SmartStand

With EasyDirect, You're in Control
Save Time and Simplify Pipette Management

With EasyDirect Pipette Asset Management and SmartStand, you have a powerful pipette tracking and calibration management system. Using the RFID chip embedded in every Rainin XLS-brand pipette, EasyDirect tracks every pipette's usage, location and service data automatically.

• Manage an unlimited number of pipettes
• Track all pipettes automatically
• Simplify calibration management and repairs

Rainin XLS Pipettes   **Multiple SmartStands**   **EasyDirect Pipette Asset Management**

Client

RFID

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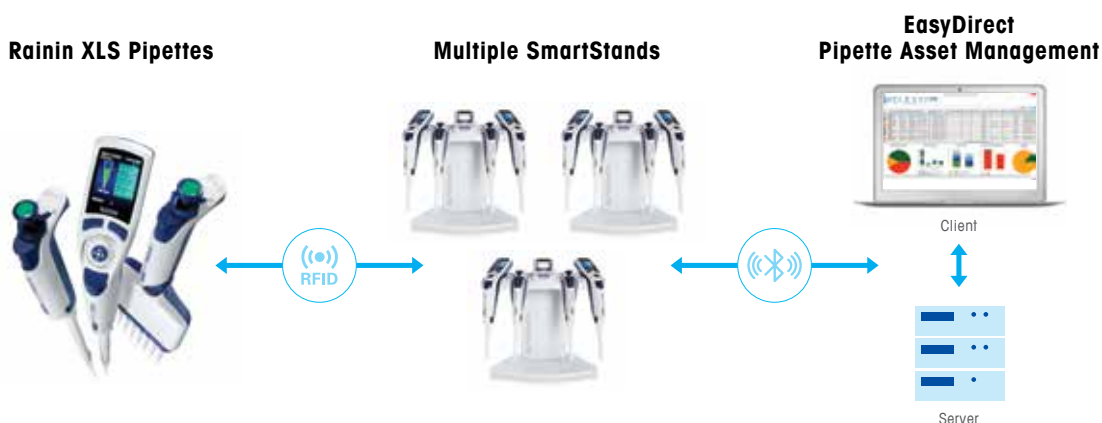
A simple, unified system for tracking and managing pipettes (all manufacturers)

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

EasyDirect 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.
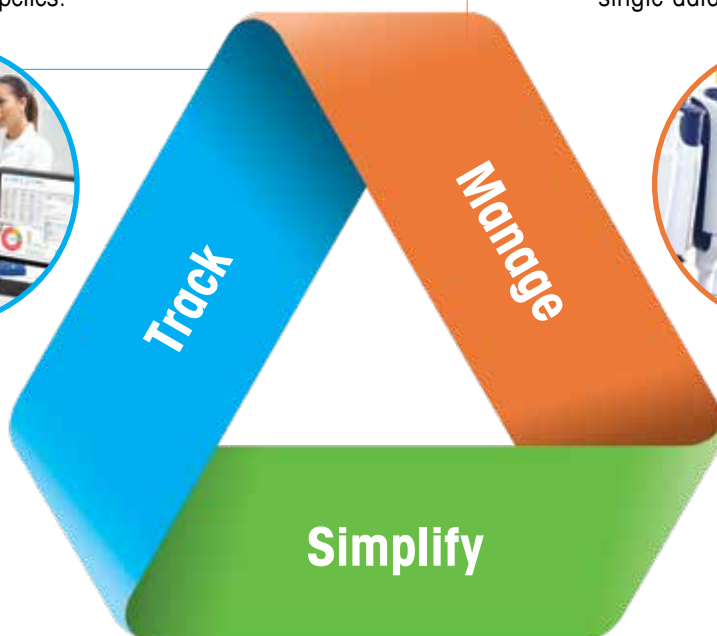
That's pipette management…simplified!

Flexible, integrated and easy to implement

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

- See all calibration data.
- Schedule calibrations.
- All critical pipette data is now 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 EasyDirect.
- Rainin calibration certificates are electronically transmitted and linked to your pipette.
- Eliminate time-consuming reading of serial numbers, barcodes or stickers.

	CATALOG No.	DESCRIPTION
EasyDirect Software	**30475913**	EasyDirect – site
	30475915	EasyDirect – unlimited
	30478260	EasyDirect – Site, Renewal
	30478262	EasyDirect – Unlimited, Renewal

▶ **www.mt.com/EasyDirectPAM**