eppendorf

Larger Display –
Easier Working

Generation E

Multipette® E3 and E3x: Dispensing without compromise on accuracy and precision

> Multipette E3 and Multipette E3x are the experts for long series pipetting and non-aqueous liquids.
www.eppendorf.com/multipette-system

»There are many reasons for a Multipette®. You are the most important one!«

In 1979, 17 years after introducing the first piston-stroke pipette, Eppendorf revolutionized the Life Science Market again – always having customer needs in mind. The first positive-displacement pipette, the Multipette, made serial pipetting without repeated liquid aspiration possible. Since then several generations of mechanical and electronic Multipettes have facilitated your daily laboratory work. We now introduce our new electronic Multipettes E3 and E3x. Read how a Multipette makes your everyday routines faster and easier.

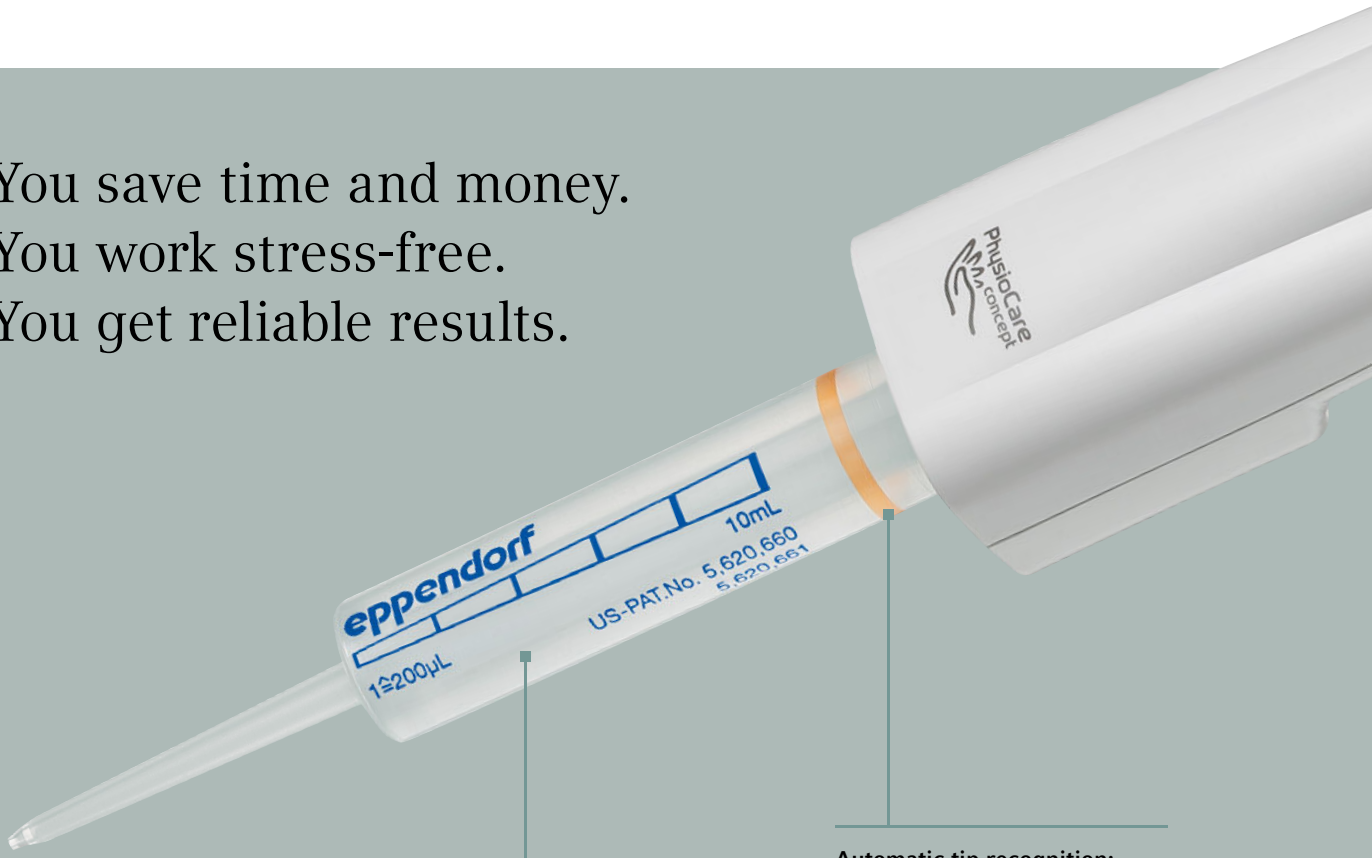
Save time
The Eppendorf Multipette pipettes make long pipetting series faster and easier. The aspirated liquid can be dispensed up to 100 times without a refill. It is an ideal and smart solution for filling plates or large series of tubes (e.g., nucleic acid purification kits).

Relax
With the light weight Multipette E3 the risk of repetitive strain injuries is reduced in various ways:
It minimizes operation forces through an electronic motor drive, and buttons are positioned to accommodate natural hand movements. A new enlarged display reduces eyes strain when reviewing settings.

Work precisely and safely
The optimized system of Multipette and Combitips® allows automatic tip recognition for ease of use. The syringe style Combitip maximizes pipetting accuracy and precision. It is not affected by liquid properties, most manual pipetting errors and provides protection from aerosol contamination.

The One Pipette Missing in Your Pipette Set.

You save time and money.
You work stress-free.
You get reliable results.



One instrument only
for precise pipetting from 1 µL to 50 mL

Automatic tip recognition:
Perfected system with Combitips advanced® for reproducible dispensing results.

FROST & SULLIVAN
2015 BEST PRACTICES AWARD
NORTH AMERICAN LIQUID HANDLING NEW PRODUCT INNOVATION AWARD

NEW! RFID chip contains all relevant data regarding the Multipette (serial no., dispensing vol., factory adjustment, and more.) For more information: *www.eppendorf.com/trackit*

One button tip ejection enables one handed operation

Defined dispensing speed increases the reproducibility of results

> Eight different speed levels allow the optimum speed for each application
> Reduced minimum speed increase the limit of viscosity of dispensable liquids
> Increased maximum speed saves time without splashing

NEW! Easy to read: Enlarged color display, optimized contrast, clear arrangement of all adjustable parameters.

NEW! Software shows all selected parameters at one glance; Proven intuitive software navigation—similar to Eppendorf Xplorer® pipettes

NEW! Display in 9 different languages

Selection wheel with seven operation modes with Multipette E3x

> *Dispensing:* Serial pipetting for up to 100 steps in a row.
> *Automatic dispensing:* Volume is dispensed at fixed intervals between 0.1 s and 10 s.
> *Pipetting:* Precise liquid transfer of up to 50mL
> *Sequential dispensing:* Individual volume setting for up to 16 dispensing steps.
> *Multi-aspirate:* Consecutive aspiration of liquid of the same volume into one Combitip.
> **NEW!** *Aspirate and dispensing:* Uptake and volume calculation of an unknown volume with immediate dispense in desired partial volumes.
> *Titrate:* Sensitive dosing of liquids while volume is displayed.
> **NEW!** *Store up to 225 different parameter settings* to save programming time for routine applications.
> **NEW!** *Sleep Mode* saves battery when not in use, and wakes up when Multipette is moved; Long life lithium-ion battery allows filling of more than hundred 96-well plates in a row.

Positive Comments from Participants

Participants of an independent usability study conducted at the Institute of Human Factors Engineering, Technical University Darmstadt, Germany, showed positive responses.

» *The display always shows exactly what to do.* «

Anonymous Tester

» *Aspirating liquid and dispensing in individual steps was easy. The settings were also easily made.* «

C. Bender
Biology student, Darmstadt, Germany

» *User-friendly operation and clear menu navigation – complex settings made easy.* «

M. Reinhard
Dipl.-Biol., Darmstadt, Germany

Positive-displacement Principle

With the Multipette/Combitips system volumes are dispensed using the positive displacement-principle. The liquid is directly dispensed without an air cushion, ensuring the correct volume is always dispensed regardless of the density, viscosity and volatility of the liquid. In addition to serial dispensing, the Multipette/Combitip system is the perfect instrument to go beyond the limitations of a standard pipette.

The Multipette/Combitip positive-displacement principle:

> Allows high-precision dispensing regardless of the physical properties of the liquid*
> Prevents aerosol contamination with hermetically sealed piston for secure dispensing
> Provides protection from radioactive and toxic substances
> Enables quick dispensing of long series with precise, repeated dispensing of identical volumes

*Viscous liquids with high resistance to flow e. g. glycerol, liquids with a different density than water, liquids with high vapor pressure e. g. acetone, liquids containing detergent lowering the surface tension, foaming liquids and liquids with different temperatures.

Multipette® E3 and Multipette® E3x at a Glance

Feature	Multipette E3	Multipette E3x
High speed dispensing with motorized piston	■	■
Automatic Combitip® advanced® tip recognition	■	■
One button tip ejection	■	■
Volume range from 1 µl to 50 ml	■	■
Li-ion battery	■	■
Illuminated display	■	■
Automatic dispensing	■	■
Pipetting	■	■
Dispensing	■	■
Aspirate (pipetting of supernatants)		■
Titrate		■
Sequential dispensing		■
Combined aspiration and dispensing mode		■

Technical specifications (information refers to the Multipette E3/Multipette E3x/Combitips advanced system)

Combitips advanced	Min. dispensing volume	Increment/step size	Max. dispensing volume	Volume	Systematic error*[1]	Random error*[1]
0.1 mL	1 µL	0.1 µL	100 µL	10 µL	±1.6%	±2.5 %
				50 µL	±1.0%	±1.5 %
				100 µL	±1.0%	±0.5 %
0.2 mL	2 µL	0.2 µL	200 µL	20 µL	±1.3%	±1.5 %
				100 µL	±1.0%	±1.0 %
				200 µL	±1.0%	±0.5 %
0.5 mL	5 µL	0.5 µL	500 µL	50 µL	±0.9%	±0.8 %
				250 µL	±0.9%	±0.5 %
				500 µL	±0.9%	±0.3 %
1 mL	10 µL	1 µL	1 mL	100 µL	±0.9%	±0.55 %
				500 µL	±0.6%	±0.3 %
				1,000 µL	±0.6%	±0.2 %
2.5 mL	25 µL	2.5 µL	2,5 mL	250 µL	±0.8%	±0.45 %
				1,250 µL	±0.5%	±0.3%
				2,500 µL	±0.5%	±0.15%
5 mL	50 µL	5 µL	5 mL	500 µL	±0.8%	±0.35%
				2,500 µL	±0.5%	±0.25%
				5,000 µL	±0.5%	±0.15%
10 mL	100 µL	10 µL	10 mL	1,000 µL	±0.5%	±0.25%
				5,000 µL	±0.4%	±0.25%
				10,000 µL	±0.4%	±0.15%
25 mL	250 µL	25 µL	25 mL	2,500 µL	±0.3%	±0.35%
				12,500 µL	±0.3%	±0.25%
				25,000 µL	±0.3%	±0.15%
50 mL	500 µL	50 µL	50 mL	5,000 µL	±0.3%	±0.5%
				25,000 µL	±0.3%	±0.2%
				50,000 µL	±0.3%	±0.15%

*1 The data for imprecision (random error) and inaccuracy (systematic error) according to EN ISO 8655 only apply when using original Eppendorf Combitips advanced, speed 5, dispensing mode.

Multipette® E3/E3x ordering information

Description	Order number
Multipette® E3 with charging adapter and 2 Combitips advanced® assortment packs	4987 000.010
Multipette® E3 with charger stand, 2 Combitips advanced® assortment packs, and charging stand	4987 000.371
Multipette® E3x with charging adapter and 2 Combitips advanced® assortment packs	4987 000.029
Multipette® E3x with charger stand, 2 Combitips advanced® assortment packs, and charging stand	4987 000.380
Charger stand for Multipette® stream/Multipette® Xstream/Multipette® E3 & E3x, for one device	4880 000.018
Charger Carousel for 4 Eppendorf Xplorer® and Xplorer® plus	4880 000.026
Multipette® charger shell for charger carousel Eppendorf Xplorer/Eppendorf Xplorer plus 4880 000.026	4880 601.003
Wallmount for Multipette® stream/Multipette® Xstream/Multipette® E3 & E3x	4986 604.001
Eppendorf TrackIT consisting of software and RFID reader	3903 000.014

Ordering information for Combitips advanced and accessories

Combitips advanced®	Color coding	Eppendorf Quality™ box of 100 pcs. (4 bags × 25 pcs.)	PCR clean*1 box of 100 pcs., (4 bags reclosable bag × 25 pcs.)	Eppendorf Biopur®*2 **box of** 100 pcs. (individually wrapped)
0.1 mL	White	0030 089.405	0030 089.766	0030 089.618
0.2 mL	Light blue	0030 089.413	0030 089.774	0030 089.626
0.5 mL	Purple	0030 089.421	0030 089.782	0030 089.634
1 mL	Yellow	0030 089.430	0030 089.790	0030 089.642
2.5 mL	Green	0030 089.448	0030 089.804	0030 089.650
5 mL	Blue	0030 089.456	0030 089.812	0030 089.669
10 mL	Orange	0030 089.464	0030 089.820	0030 089.677
25 mL*3	Red	0030 089.472	0030 089.839	0030 089.685
50 mL*3	Light gray	0030 089.480	0030 089.847	0030 089.693
Accessories				
25 mL adapter (1 pc.)	Red	0030 089.715		
25 mL adapter (7 pcs.)	Red			0030 089.731
50 mL adapter (1 pc.)	Light gray	0030 089.723		
50 mL adapter (7 pcs.)	Light gray			0030 089.740
Combitip Rack (for 8 Combitips advanced®, 0.1 mL–10 mL)		0030 089.758		
Combitips advanced Assortment pack (1 Combitip of each size, incl. adapters)		0030 089.936		

*1 PCR clean: batch tested and certified to be free of: human DNA, DNase, RNase, PCR inhibitors
*2 Biopur®: batch tested and certified to be sterile and free of: human and bacterial DNA, DNase, RNase, PCR inhibitors, ATP, Pyogen
*3 4 boxes of 25 pcs. each. Each box contains an adapter.

> We Care for Your Pipettes

Regular maintenance, calibration and adjustment ensure that your pipettes continue to generate reproducible results. We offer a range of service options, from quick economical calibration to GLP/GMP custom-designed, calibration services – according to national and international standards.

> More details and local offers: www.eppendorf.com/epservices
> Video «Eppendorf Pipette Service»: www.eppendorf.com/pipette-video

Your local distributor: www.eppendorf.com/contact
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www.eppendorf.com/multipette-system

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