

Fast  
Efficient  
Economic



reddot design award

Multipipette stream  
Multipipette Xstream

With  
illuminated  
display

# Dispensing with Style

Manual and electronic Multipipette hand dispensers

**eppendorf**

# The Beauty of a Unique System

## Electronic and Manual Multipette Dispenser and Combitips plus

### The Instruments

The Eppendorf Multipette range of electronic and manual hand dispensers, is ideal for process acceleration and saving time on long-series pipetting. The increased volume selection provides outstanding flexibility and exceptional support for research and routine tasks, and smooth handling reduces the fatigue associated with repetitive work.

### The Consumables

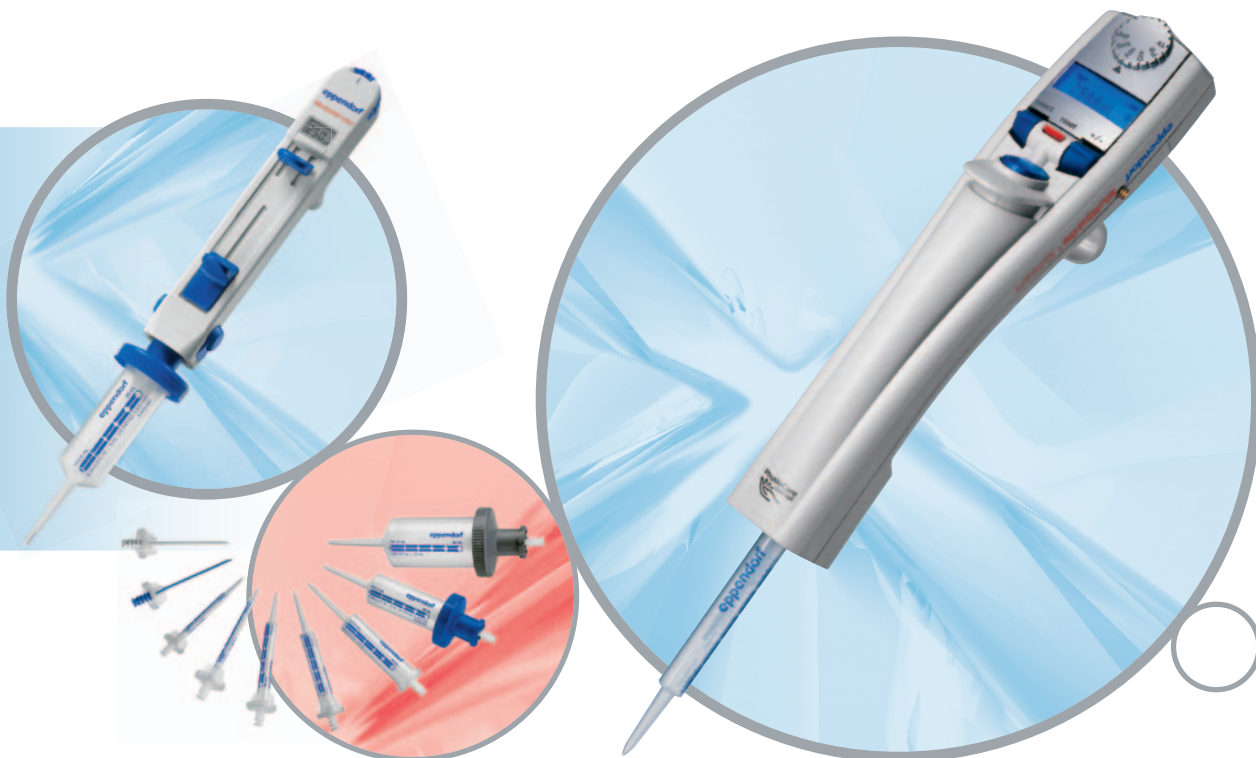
Combitips plus tips easily attach to the Multipettes; they are recognized by the dispenser's built-in sensor, and the volume appears automatically in the display. All time-consuming volume calculations and incorrect dispensing volumes are completely eliminated. The nine sizes of Combitips allow a wider dispensing range of up to 112 different volumes (Multipette plus) or more than 2,500 different volumes are possible (Multipette stream/Xstream). They provide the unique advantage of dispensing, e.g.  $100 \times 250 \mu\text{L}$  without stopping for a refill. Always contamination-free!

### The Liquids

Combitips plus tips function according to the positive displacement principle, which ensures that the correct volume is dispensed regardless of the density or viscosity of the liquid used. The positive displacement system provides safer dispensing of radioactive and toxic substances, as well as solutions with high vapor pressure. No aerosols are formed, and Combitips can simply be ejected and disposed after use. The Combitips are easily replaced, and the tips can be ejected at the push of buttons, providing contamination-free ejection.

### The Conclusion

The Eppendorf Multipette/Combitips system is a sophisticated systematic solution for repetitive liquid handling applications, especially with hazardous, volatile or viscous liquids.



# A Quantum Leap in Serial Dispensing

## Electronic Hand Dispenser Multipette stream and Multipette Xstream

The Multipette stream and Xstream are the first electronic dispensers to combine easy handling with a broad range of features. The Multipette stream is suitable for all standard applications; for added versatility, such as titration and aspirating of supernatants, the Multipette Xstream is your first choice. When combined with the Combitips plus tip system, both dispenser/tip teams make an unbeatable and essential lab tool for all applications. More than 2,500 different volumes from 1  $\mu\text{L}$  to 50 mL can be dispensed. A unique illuminated display ensures safe and accurate readings.



### Application

- Electronic dispensing with programmable memory functions
- Contamination-free dispensing using the positive displacement principle
- Ideal also for viscous solutions (e.g. glycerol, oil) or liquids with high vapor pressure (e.g. acetone, ethanol)
- Dispensing volumes in long series

Online: [www.eppendorf.com/mpxstream](http://www.eppendorf.com/mpxstream)

### Multipette stream and Multipette Xstream at a glance

Feature	Multipette <sup>®</sup> stream	Multipette <sup>®</sup> Xstream
Positive displacement principle	●	●
Rapid, ergonomic dispensing with motorized piston	●	●
Automatic Combitip <sup>®</sup> plus tip recognition	●	●
Two year warranty	●	●
One button tip ejector	●	●
Volume range from 1 $\mu\text{L}$ to 50 mL	●	●
Li-ion battery	●	●
Illuminated display	●	●
Automatic dispensing	●	●
Pipetting	●	●
Dispensing	●	●
Aspiration (pipetting of supernatants)		●
Titration		●
Sequential dispensing		●

# Reliability in Your Hand

## Manual Hand Dispenser Multipette plus

The Multipette plus manual dispenser is the ideal precision instrument for saving time and speeding up long series pipetting. Increased volume selection provides all-round support for research and routine tasks allowing outstanding flexibility.

The electronic display ensures error free dispensing combined with ergonomic handling.

- The rounded, grooved grip of the Multipette plus means easier dispensing with less stress on hand and thumb muscles

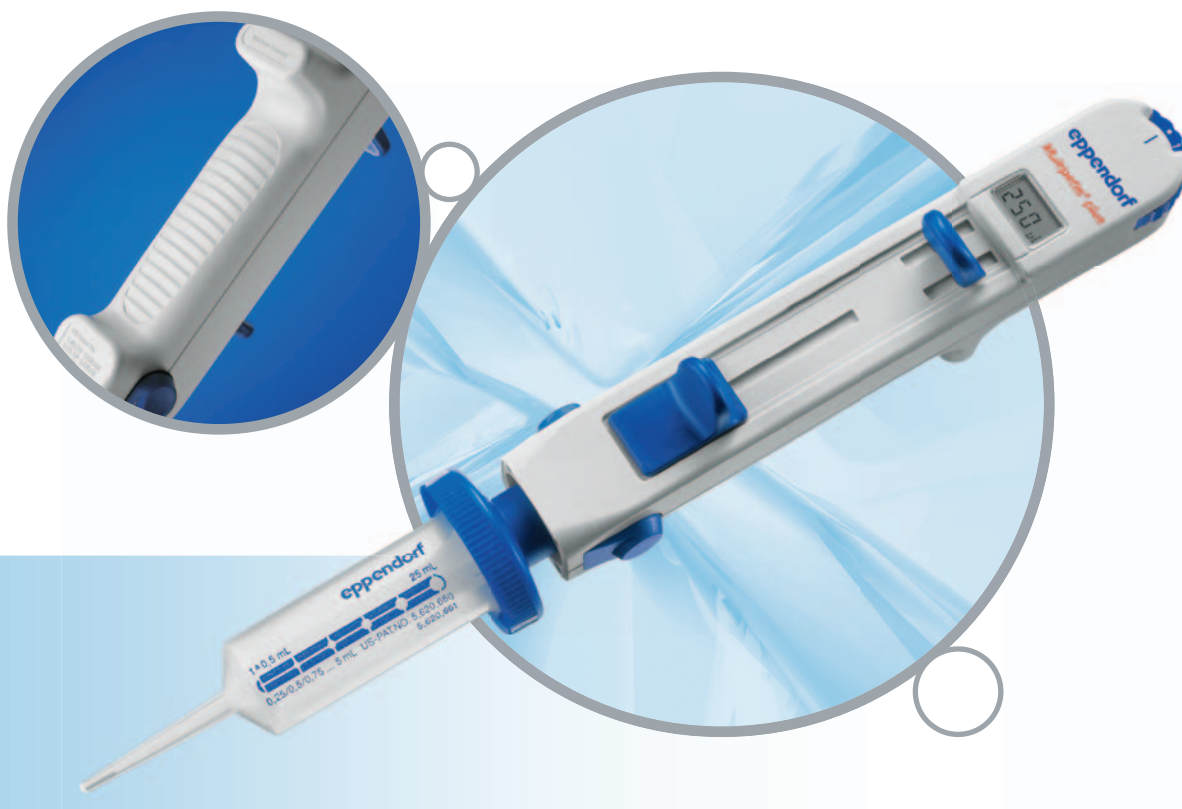
### Application

- Dispensing volumes in long series
- Contamination-free dispensing using the positive displacement principle
- Ideal for viscous solutions (e.g., glycerol, oil) or liquids with high vapor pressure (e.g., acetone, ethanol)

### Product features

- Easy to read: automatic Combitip recognition with electronic volume display
- Easy volume setting
- More flexibility with 112 different volumes from 1  $\mu$ L to 10 mL
- Up to 100 dispensings per filling for easy processing of long series
- Versatile, even for “uneven” volumes (e.g., 1  $\mu$ L, 3  $\mu$ L or 17  $\mu$ L)
- Safe, due to easy, contact-free Combitips attachment and ejection
- Two-year warranty

Online: [www.eppendorf.com/mpplus](http://www.eppendorf.com/mpplus)



# A Pure Pleasure to Work with

## Combitips plus and Multipette Accessories

In addition to standard purity, Combitips are also available as Eppendorf Biopur®—signifying outstanding biological purity. Eppendorf Biopur Combitips are guaranteed sterile as well as pyrogen-, RNase-, DNA- and ATP-free. They meet the most stringent demands of the medical, pharmaceutical and food industries, as well as PCR applications, molecular biology and cell technology labs. This purity is ensured through an automated manufacturing process, which safeguards the product against any contamination with biological substances. Individual lot certificates are available at [www.eppendorf.com/certificates](http://www.eppendorf.com/certificates)

The rotating pipette stand design means that the Multipette plus is no longer held at the bottom, ruling out potential contamination from being put on a stand. Multipette, Multipette plus and Varipette pipettes can likewise be stored in the new pipette carousel. For the electronic Multipette stream/Xstream a charging stand is available. In addition to the pipette carousel, there is the practical wall-mounted pipette bracket (below left). This allows the Multipette pipette to always be within reach without wasting any valuable bench space.

### Product features Combitips plus

- Ideal system component for all Multipette, Multipette plus and Multipette stream/Xstream (electronic), as well as for EDOS (automatic dispensing) system
- 20 different dispensing volumes per each size of Combitips (Multipette plus)
- Several hundred different volumes per each size of combitips (Multipette stream/Xstream)
- Higher throughput with up to 100 dispensings per filling
- Reliable results ensured by positive displacement system
- Available in Eppendorf Quality and Eppendorf Biopur purity levels
- 9 different sizes, 0.1 mL–50 mL
- Certified trace metal release
- Contamination-free

Online: [www.eppendorf.com/combitips](http://www.eppendorf.com/combitips)



● Wall-mount



● Charging stand



● Pipette stand



# Precision and Versatility for Professionals

## Application Examples for the Multipette

### Academic research / Molecular-biology laboratory

- **Application:** Screening with mouse mutants by means of PCR
- **Use:** Injection of aliquots of a PCR master mix into a 96-well twin.tec PCR plate
- **Dispenser:** Multipette with a 25 mL Combitip plus
- **Location:** Hamburg Centre for Molecular Neurobiology / WG Dr. Riethmacher

### Diagnostics / Clinical laboratory

- **Application:** Quantitative determination of Protein S (free and total) by means of ELISA (Protein S plays a role in the blood coagulation process).
- **Use:** Addition of 100 µL of stop solution to a microtest plate. This produces a change in colour.
- **Dispenser:** Multipette with a 5 mL Combitip plus
- **Location:** Laboratory at Dr. v. Froreich and Partners, Hamburg

### Industrial research / Immunology laboratory

- **Application:** Phenylalanin screening assay (detection of L-phenylalanin in the blood spots of newborn babies).
- **Use:** Addition of 100 µL of stained trichloroacetic acid in connection with the further development of the assay
- **Dispenser:** Multipette with a 5 mL Combitip plus
- **Location:** Immuno-Biological-Laboratories

### Environmental analysis / Chemical laboratory

- **Application:** Complete break down of a soil sample, followed by ICP determination of the main and trace elements K, Mg, Ca, Mn, Si, Fe, P, S, Pb, Cu, Zn, Cd.
- **Use:** Addition of 2 mL each of hydrofluoric acid (40%) and nitric acid (70%) to a microwave standard vessel HP 40. Subsequent microwave treatment and addition of 2% nitric acid.
- **Dispenser:** Multipette with a 50 mL Combitip plus
- **Location:** Schleswig Holstein State Laboratory

### Multipette References

A short extract of well known companies which rely daily on the Multipette system:

- F. Hoffmann-La Roche Ltd
- Bayer HealthCare AG
- Boehringer Ingelheim Pharma GmbH & Co. KG
- ALTANA Pharma AG
- ALTANA Chemie AG
- Lilly Deutschland GmbH
- Schering AG
- AstraZeneca GmbH
- BASF AG



## Dispensing Acids, Bases and Organic Solvents with the Multipette

We have tested the Multipette/Combitips system with a number of acids, bases and organic solvents with a variety of viscosities and densities in our laboratories to provide you with practical data in this regard.

### ● Random [d] and systematic [cv] measurement deviations in percent when dispensing selected liquids

The experiments were performed using a Multipette plus with liquids at room temperature; the results of 10 dispensing operations with a 5 mL Combitips plus tip are shown.

Liquid	Conc.	100 $\mu$ L [d]	100 $\mu$ L [cv]	1,000 $\mu$ L [d]	1,000 $\mu$ L [cv]	Vapor pressure at 20 °C [hPa]	Density at 20 °C [g/cm <sup>3</sup> ]	Viscosity at 20 °C [mPa s]
Double-distilled water	100%	±0.6	≤0.6	±0.5	≤0.25	23	1	1
Acetone	100%	0.4	0.5	-0.2	0.3	240	0.79	0.32
Acetonitrile	100%	-0.4	1.1	-0.6	0.2	97	0.79	0.31 [25 °C]
Formid acid	98%	-1.7	0.3	-1.9	0.2	42	1.22	1.8
Ammonium hydroxide	32%	1.7	0.5	2.4	0.8	837	0.89	1.3 [26%]
Aniline	100%	-1.8	0.8	-1.3	0.3	0.5	1.03	4.4
Dimethyl formamide (DMF)	100%	0.4	0.6	0.3	0.1	3.77	0.94	0.82
Dimethyl sulfoxide (DMSO)	100%	0.1	0.7	0.1	0.2	0.56	1.1	2.14
Ethyl acetate	100%	-0.4	1.0	-0.4	0.2	97	0.9	0.44
Ethanol	98%	-0.1	0.6	0.1	0.1	58	0.78	1.20
Formaldehyde	37%	0.8	0.3	0.8	0.1	1.3	1.08	2.5 [25 °C]
Isopropanol	99%	-0.8	1.4	-0.3	0.2	43	0.78	2.2
Perchloric acid	60%	-2.0	0.5	-1.9	0.1	9	1.53	-
Phosphoric acid	85%	-1.7	0.9	-1.9	0.3	2	1.71	47
Nitric acid	65%	-1.3	0.3	-1.9	0.1	9.4/9	1.41	1.49 [40%]
Hydrochloric acid	37%	-2.1	0.5	-1.7	0.3	213	1.19	2.0
Sulfuric acid	95-97%	-2.6	0.6	-4.4	0.3	0.0016	1.84	26.9
Tetrachloromethane	100%	-0.5	1.0	-0.2	0.2	122	1.59	0.96
Tetrahydrofuran (THF)	100%	-2.7	0.7	-0.3	0.2	173	0.88	0.48
Toluene (methyl benzene)	100%	-0.7	0.9	-1.1	0.1	29	0.87	0.6
Trichloroethylene	100%	-0.4	1.9	-0.1	0.3	77	1.46	0.55
Trichloromethane (chloroform)	100%	-0.1	0.4	0.3	0.2	213	1.47	0.56
Triethylamine	100%	-0.4	0.4	0.1	0.1	69	0.72	0.36
Mean value		1.1	0.7	1.0	0.2			

### Other industrial applications

The Multipette is also used in many other areas not directly associated with natural sciences. Its excellent capability of dispensing highly viscous liquids make it ideal for use in the automotive, petroleum and jewelry

industries, as well as a number of others. Varnishes, oils or even adhesives, for example can be dispensed with this universal manual dispenser with a great degree of accuracy and precision.

## Combitip plus for Multipette plus and Multipette stream/Xstream

### Technical specifications

Combitip plus	Volume min./max.	Increment/step size	Max. dispensing volume	Volume	Inaccuracy* <sup>1</sup>	Imprecision* <sup>1</sup>
<b>for Multipette plus and Combitips plus system</b>						
0.1 mL	1 µL	1 µL	20 µL	2 µL	±1.6%	≤3.0%
	20 µL			20 µL	±1.0%	≤2.0%
0.2 mL	2 µL	2 µL	40 µL	4 µL	±1.3%	≤2.0%
	40 µL			40 µL	±0.8%	≤1.5%
0.5 mL	5 µL	5 µL	100 µL	10 µL	±0.9%	≤1.5%
	100 µL			100 µL	±0.8%	≤0.6%
1 mL	10 µL	10 µL	200 µL	20 µL	±0.9%	≤0.9%
	200 µL			200 µL	±0.6%	≤0.4%
2.5 mL	25 µL	25 µL	500 µL	50 µL	±0.8%	≤0.8%
	500 µL			500 µL	±0.5%	≤0.3%
5 mL	50 µL	50 µL	1,000 µL	100 µL	±0.6%	≤0.6%
	1,000 µL			1,000 µL	±0.5%	≤0.25%
10 mL	100 µL	100 µL	2,000 µL	200 µL	±0.5%	≤0.6%
	2,000 µL			2,000 µL	±0.5%	≤0.25%
25 mL	250 µL	250 µL	5,000 µL	500 µL	±0.4%	≤0.6%
	5,000 µL			5,000 µL	±0.3%	≤0.25%
50 mL	500 µL	500 µL	10,000 µL	1,000 µL	±0.3%	≤0.5%
	10,000 µL			10,000 µL	±0.3%	≤0.25%
<b>for Multipette stream/Xstream and Combitips plus system</b>						
0.1 mL	1 µL	0.1 µL	0.1 mL	10 µL	±1.6%	≤2.5%
	100 µL			100 µL	±1.0%	≤0.5%
0.2 mL	2 µL	0.2 µL	0.2 mL	20 µL	±1.3%	≤1.5%
	200 µL			200 µL	±1.0%	≤0.5%
0.5 mL	5 µL	0.5 µL	0.5 mL	50 µL	±0.9%	≤0.8%
	500 µL			500 µL	±0.9%	≤0.3%
1 mL	10 µL	1 µL	1 mL	100 µL	±0.9%	≤0.55%
	1 mL			1,000 µL	±0.6%	≤0.2%
2.5 mL	25 µL	2.5 µL	2.5 mL	250 µL	±0.8%	≤0.45%
	2.5 mL			2,500 µL	±0.5%	≤0.15%
5 mL	50 µL	5 µL	5 mL	500 µL	±0.8%	≤0.35%
	5 mL			5,000 µL	±0.5%	≤0.15%
10 mL	100 µL	10 µL	10 mL	1,000 µL	±0.5%	≤0.25%
	10 mL			10,000 µL	±0.4%	≤0.15%
25 mL	250 µL	25 µL	25 mL	2,500 µL	±0.3%	≤0.35%
	25 mL			25,000 µL	±0.3%	≤0.15%
50 mL	500 µL	50 µL	50 mL	5,000 µL	±0.3%	≤0.5%
	50 mL			50,000 µL	±0.3%	≤0.15%

\*<sup>1</sup> The data for imprecision (random measurement error) and inaccuracy (systematic measurement error) according to EN ISO 8655 is valid only when original Eppendorf Combitips plus are used.

## Volume Table for Using Combitips with Multipette plus

(The positions and dispensing steps which are marked in **bold** are based on Combitips plus used with the Multipette 4780)  
Position of the volume selection dial:

	0.5	1/1	1.5	2/2	2.5	3/3	3.5	4/4	4.5	5/5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Maximum number of dispensing volumes:	100	50/48	33	25/23	20	16/15	14	12/11	11	10/8	9	8	7	7	6	6	5	5	5	5
<b>Combitip plus with the following volumes:</b>																				
<b>0.1 mL</b>	1 µL	2 µL	3 µL	4 µL	5 µL	6 µL	7 µL	8 µL	9 µL	10 µL	11 µL	12 µL	13 µL	14 µL	15 µL	16 µL	17 µL	18 µL	19 µL	20 µL
<b>0.2 mL</b>	2 µL	4 µL	6 µL	8 µL	10 µL	12 µL	14 µL	16 µL	18 µL	20 µL	22 µL	24 µL	26 µL	28 µL	30 µL	32 µL	34 µL	36 µL	38 µL	40 µL
<b>0.5 mL</b>	5 µL	10 µL	15 µL	20 µL	25 µL	30 µL	35 µL	40 µL	45 µL	50 µL	55 µL	60 µL	65 µL	70 µL	75 µL	80 µL	85 µL	90 µL	95 µL	100 µL
<b>1.0 mL</b>	10 µL	20 µL	30 µL	40 µL	50 µL	60 µL	70 µL	80 µL	90 µL	100 µL	110 µL	120 µL	130 µL	140 µL	150 µL	160 µL	170 µL	180 µL	190 µL	200 µL
<b>2.5 mL</b>	25 µL	50 µL	75 µL	100 µL	125 µL	150 µL	175 µL	200 µL	225 µL	250 µL	275 µL	300 µL	325 µL	350 µL	375 µL	400 µL	425 µL	450 µL	475 µL	500 µL
<b>5 mL</b>	50 µL	100 µL	150 µL	200 µL	250 µL	300 µL	350 µL	400 µL	450 µL	500 µL	550 µL	600 µL	650 µL	700 µL	750 µL	800 µL	850 µL	900 µL	950 µL	1.0 mL
<b>10 mL</b>	100 µL	200 µL	300 µL	400 µL	500 µL	600 µL	700 µL	800 µL	900 µL	1.0 mL	1.1 mL	1.2 mL	1.3 mL	1.4 mL	1.5 mL	1.6 mL	1.7 mL	1.8 mL	1.9 mL	2.0 mL
<b>25 mL*</b>	250 µL	500 µL	750 µL	1.0 mL	1.25 mL	1.5 mL	1.75 mL	2.0 mL	2.25 mL	2.5 mL	2.75 mL	3.0 mL	3.25 mL	3.5 mL	3.75 mL	4.0 mL	4.25 mL	4.5 mL	4.75 mL	5.0 mL
<b>50 mL*</b>	500 µL	1.0 mL	1.5 mL	2.0 mL	2.5 mL	3.0 mL	3.5 mL	4.0 mL	4.5 mL	5.0 mL	5.5 mL	6.0 mL	6.5 mL	7.0 mL	7.5 mL	8.0 mL	8.5 mL	9.0 mL	9.5 mL	10 mL

\* 25 mL and 50 mL Combitips plus must be used with the supplied adapter.

## Multipette, Combitips plus and Accessories

### Ordering information

Description	Order no.	Order no.
<b>Multipette® plus</b>	4981 000.019	
<b>Multipette® stream</b> , includes charging adapter, 100–240 V/50–60 Hz	4986 000.017	
<b>Multipette® Xstream</b> , includes charging adapter, 100–240 V/50–60 Hz	4986 000.025	
<b>Charging stand, for Multipette® stream/Xstream</b> , holds one unit	4880 000.018	
<b>Charger shell, for charger carousel series 4880 for Multipette stream/Xstream</b>	4880 601.003	
<b>Multipette® plus adapter</b> , for pipette carousel stand	4981 201.006	
<b>Multipette® plus Wall Mount</b>	4981 203.009	
<b>Combitip® Rack</b> , for mounting Combitips plus tips	0030 069.897	
<b>Combitips plus® tips</b>	<b>Standard</b> (set of 100)	<b>Eppendorf Biopur®*</b> (individually wrapped, set of 100)
0.1 mL	0030 069.200	0030 069.404
0.2 mL	0030 069.218	0030 069.412
0.5 mL	0030 069.226	0030 069.420
1 mL	0030 069.234	0030 069.439
2.5 mL	0030 069.242	0030 069.447
5.0 mL	0030 069.250	0030 069.455
10 mL	0030 069.269	0030 069.463
25 mL	0030 069.293	0030 069.390
50 mL	0030 069.277	0030 069.471
25 mL adapter (1 piece), blue	0030 069.528	
50 mL adapter (1 piece), dark gray	0030 069.161	
25 mL adapter (set of 7)		0030 069.498
50 mL adapter (set of 7)		0030 069.480
<b>Combitips plus® tips assortment pack</b> , includes five of each size plus one 50 mL and one 25 mL adapter	0030 069.285	
<b>Combilong™ (set of two)</b> , aspirating aid for removing liquids from volumetric flasks and tall bottles; Combitips Plus tips sizes 5 mL, 25 mL and 50 mL	0030 059.506	

\* Eppendorf Biopur Combitips (individually wrapped) are guaranteed to be sterile, RNase-, DNA-, ATP- and pyrogen-free.  
Technical specifications subject to change.

# Our Knowledge, Our Commitment

Pipette maintenance, calibration and adjustment services



## Performance Plans Features

- Eppendorf service quality and integrity
- Certified calibration reports and dated calibration service labels
- Easy to understand plan options and costs

## Value of Services

- Consistent and reliable results
- Maximize pipette lifetime
- GLP compliant documentation



For more information, service requests and local offers go to [www.eppendorf.com/epservices](http://www.eppendorf.com/epservices)  
Performance Plans are available in selected countries only and service offer may differ.

**eppendorf**  
*In touch with life*

Your local distributor: [www.eppendorf.com/worldwide](http://www.eppendorf.com/worldwide)

Eppendorf AG · 22331 Hamburg · Germany · Tel: +49 40 53801-0 · Fax: +49 40 538 01-556 · E-mail: [eppendorf@eppendorf.com](mailto:eppendorf@eppendorf.com)

Eppendorf North America, Inc. · 102 Motor Parkway · Hauppauge, N.Y. 11788-5178 · USA

Tel: +1 516 334 7500 · Toll free phone: +1 800-645-3050 · Fax: +1 516 334 7506 · E-mail: [info@eppendorf.com](mailto:info@eppendorf.com)

**Application Support** Europe: Tel: +49 1803 666 789 (Preis je nach Tarif im Ausland; 9 ct/min aus dem dt. Festnetz; Mobilfunkhöchstpreis 42 ct/min)  
E-mail: [support@eppendorf.com](mailto:support@eppendorf.com)

North America: Tel: +1 800 645 3050 · E-mail: [techserv@eppendorf.com](mailto:techserv@eppendorf.com)

Asia Pacific: Tel: +60 3 8023 6869 · E-mail: [support\\_asiapacific@eppendorf.com](mailto:support_asiapacific@eppendorf.com)