

Certificate of Quality

Eppendorf Combitip® Plus

With over 40 years' experience, Eppendorf AG is a leading manufacturer of plastic laboratory consumables.

Eppendorf Combitips Plus

are designed for use with the following instruments

- Multipette® 4780 / Repeater® Pipette, Model 4780
- Multipette® plus 4980 / Repeater® Plus Pipette, Model 4980
- Multipette® plus 4981 / Repeater® Plus Pipette, Model 4981
- Multipette® pro 4985 / Repeater® Pro, Model 4985
- Multipette® stream / Multipette® Xstream, Repeater® stream / Repeater® Xstream, Model 4986

● and Eppendorf EDOS® 5222 to form extremely reliable and precise positive-displacement systems available.

Advanced Molding Process

The unique, finely-extended tip guarantees accurate volume delivery and assures reliable results and outstanding reproducibility. Accuracy and precision values are met without the need to attach a pipette tip to any size Combitip Plus.

Composition

Eppendorf Combitips Plus are made from grades of polypropylene or polyethylene which fulfill the FDA requirement 21 CFR § 177.1520 "Olefin polymers".

All materials do not contain metallic dyes or latex. The piston/cylinder fit has been engineered to reduce friction for optimally smooth piston movement and performance.

The pistons of all the sizes are made from PE (polyethylene).

Quality Assurance

Manufacturing is continually monitored through stringent quality control procedures, ensuring the best possible product.

The Eppendorf Quality Management System is certified in accordance with the DIN EN ISO 9001 and DIN EN ISO 13 485 standards.

Manufacturer Guarantee

Eppendorf guarantees that this individual product batch has been checked, and when used in conjunction with the above-mentioned pipetting systems, complies with all specifications pertaining to accuracy and precision (see overleaf).



Dr. H.-G. Köhn
Managing Director



H. G. Schmidt
Head of Quality Management

eppendorf

Technical specifications Eppendorf Combitip® Plus

Multipette® 4780 / Repeater® Pipette, Model 4780

Combitip® Plus	Volume μL	Systematic error (Inaccuracy) %	Random error (Imprecision; CV) %
0.1 mL	2	± 1.6	≤ 5.0
	10	± 1.6	≤ 2.5
0.2 mL	4	± 1.3	≤ 3.0
	20	± 1.3	≤ 2.0
0.5 mL	10	± 1.0	≤ 1.5
	50	± 1.0	≤ 0.8
1.0 mL	20	± 0.9	≤ 0.9
	100	± 0.9	≤ 0.6
2.5 mL	50	± 0.8	≤ 0.8
	250	± 0.8	≤ 0.5
5.0 mL	100	± 0.6	≤ 0.6
	500	± 0.6	≤ 0.3
10 mL	200	± 0.5	≤ 0.6
	1 000	± 0.5	≤ 0.3
25 mL	500	± 0.4	≤ 0.6
	2 500	± 0.3	≤ 0.25
50 mL	1 000	± 0.3	≤ 0.5
	5 000	± 0.3	≤ 0.25

Multipette® plus 4980 and 4981 / Repeater® Plus Pipette, Model 4980 and 4981

Combitip® Plus	Volume μL	Systematic error (Inaccuracy) %	Random error (Imprecision; CV) %
0.1 mL	2	± 1.6	≤ 3.0
	20	± 1.0	≤ 2.0
0.2 mL	4	± 1.3	≤ 2.0
	40	± 0.8	≤ 1.5
0.5 mL	10	± 0.9	≤ 1.5
	100	± 0.8	≤ 0.6
1.0 mL	20	± 0.9	≤ 0.9
	200	± 0.6	≤ 0.4
2.5 mL	50	± 0.8	≤ 0.8
	500	± 0.5	≤ 0.3
5.0 mL	100	± 0.6	≤ 0.6
	1 000	± 0.5	≤ 0.25
10 mL	200	± 0.5	≤ 0.6
	2 000	± 0.5	≤ 0.25
25 mL*	500	± 0.4	≤ 0.6
	5 000	± 0.3	≤ 0.25
50 mL	1 000	± 0.3	≤ 0.5
	10 000	± 0.3	≤ 0.3

Eppendorf EDOS® 5222

Combitip® Plus	Volume μL	Systematic error (Inaccuracy) %	Random error (Imprecision; CV) %
0.1 mL	10	± 1.0	≤ 2.0
	100	± 1.0	≤ 0.5
0.2 mL	20	± 1.0	≤ 1.5
	200	± 1.0	≤ 0.5
0.5 mL	50	± 0.9	≤ 0.7
	500	± 0.9	≤ 0.3
1.0 mL	100	± 0.9	≤ 0.5
	1 000	± 0.5	≤ 0.2
2.5 mL	250	± 0.8	≤ 0.5
	2 500	± 0.5	≤ 0.2
5.0 mL	500	± 0.8	≤ 0.3
	5 000	± 0.5	≤ 0.15
10 mL	1 000	± 0.5	≤ 0.3
	10 000	± 0.5	≤ 0.15
25 mL	2 500	± 0.3	≤ 0.3
	25 000	± 0.3	≤ 0.15
50 mL	5 000	± 0.3	≤ 0.3
	50 000	± 0.3	≤ 0.15

Multipette® pro / Repeater® Pro Multipette® stream / Xstream Repeater® stream / Xstream

Combitip® Plus	Volume μL	Systematic error (Inaccuracy) %	Random error (Imprecision; CV) %
0.1 mL	10	± 1.6	≤ 2.5
	100	± 1.0	≤ 0.5
0.2 mL	20	± 1.3	≤ 1.5
	200	± 1.0	≤ 0.5
0.5 mL	50	± 0.9	≤ 0.8
	500	± 0.9	≤ 0.3
1.0 mL	100	± 0.9	≤ 0.55
	1 000	± 0.6	≤ 0.2
2.5 mL	250	± 0.8	≤ 0.45
	2 500	± 0.5	≤ 0.15
5.0 mL	500	± 0.8	≤ 0.35
	5 000	± 0.5	≤ 0.15
10 mL	1 000	± 0.5	≤ 0.25
	10 000	± 0.4	≤ 0.15
25 mL**	2 500	± 0.3	≤ 0.35
	25 000	± 0.3	≤ 0.15
50 mL	5 000	± 0.3	≤ 0.50
	50 000	± 0.3	≤ 0.15

Test conditions in accordance with DIN EN ISO 8655

Liquid: Distilled water, in accordance with DIN ISO 3696

Reference temperature: 20 – 25 °C, constant to ± 0.5 °C,

with Original Eppendorf Combitip Plus Tips

Technical specifications subject to change!

* 25 mL Combitip plus only applicable with 4981 (blue function keys)

**25 mL Combitip plus and Multipette® pro or Repeater® pro:

Model with blue function keys required

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In touch with life

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