



Eppendorf Biomaster 4830

Bedienungsanleitung
Instruction Manual

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1 Design principle / 2 Technical data

1 Design principle

The Biomaster is a variable pipette designed for very sensitive tests. It functions free of carryover in the volume range 1 to 20 μl .

Its tip, the Mastertip, can be mounted with one hand. The Mastertip has an integrated piston which prevents the formation of aerosols and, in turn, sample contamination.

The Biomaster is UV-resistant and autoclavable. Mastertips are autoclavable. Please refer to Sec. 5, Sterilization, before autoclaving (121 °C, 20 min).

2 Technical data

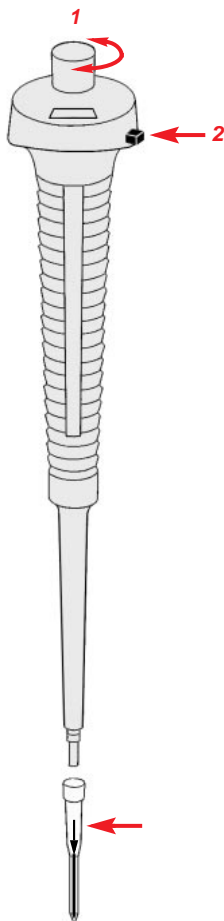
Volume	Systematic error (Inaccuracy)	Random error (Imprecision; CV)
2 μl	$\pm 6.0 \%$	$\leq 4.0 \%$
3 μl	$\pm 5.0 \%$	$\leq 3.0 \%$
5 μl	$\pm 4.0 \%$	$\leq 2.0 \%$
10 μl	$\pm 3.0 \%$	$\leq 1.5 \%$
20 μl	$\pm 2.5 \%$	$\leq 0.8 \%$

Liquid:	Bidistilled water
Reference temperature:	20 – 25 °C, constant to ± 0.5 °C
Number of determinations:	10, in accordance with DIN 12 650 and ISO 8655 with Original Eppendorf Mastertips (autoclaved at 121 °C, 20 min.)

Technical specifications subject to change!

With volumes < 2 μl , accuracy and precision depend greatly on the sample and the experience of the user, therefore, no limits are stated.

3 Mode of operation



3 Mode of operation

3.1 Volume setting

- Press catch (2) and hold down.
- Adjust volume by turning the control button (1).
- Release catch. The volume set is now secured against inadvertent adjustment.

3.2 Tip take-up

- Attach a Mastertip (from the tip box) to the Biomaster so that it locks distinctly.
- Keep the pipette in this position (tip in box) and press control button firmly down to second stop. The piston is then fixed in the Biomaster.
- Release control button. The piston glides back in the tip up to the stop. The system is ready for use.

3.3 Filling

- Press control button down to first stop.
- Immerse Mastertip vertically approx. 3 mm into the liquid.
- Let control button glide back slowly.
- Slide Mastertip out of the liquid along the inside of the vessel.
- Wipe off any drops with lint-free tissue. Take care not to aspirate any liquid from the Mastertip.

3.4 Dispensing

- Hold Mastertip at an angle against the inside of the vessel.
- Press control button **down to first stop**.
- Hold down control button and slide Mastertip out against the inside of the vessel.

3.5 Tip ejection

- To eject Mastertip, press control button right down.

Note:

Slight liquid residue in the tip of the Mastertip does not belong to the dispensing volume and has no effect on precision and accuracy.

4 Testing the Biomaster

The Biomaster can be tested by weighing the pipetted volume of bidistilled water on a sufficiently sensitive analytical balance:

bidistilled water, weighing vessel, pipette and pipette tips must have reached the same temperature.

The weighings should be performed at 20 – 25 °C.

The temperature must be constant to ± 0.5 °C.

To calculate the volume, divide the weight of the water by its density (at 20 °C: 0.9982). This test is based on DIN 12 650 and ISO 8655.

5 Sterilization / 6 Cleaning / Maintenance

5 Sterilization

The entire **Biomaster** can be autoclaved at 121 °C, for 20 min. Before autoclaving, loosen the upper part of the pipette from the lower part by rotating twice. After autoclaving and before reassembling, the Biomaster must be dry and completely cooled. Its housing, made of special plastic, permits treatment with UV-light (up to 254 nm).

The **Mastertips** can also be autoclaved at 121 °C, 20 min. The temperature and time for autoclaving must be strictly observed. Otherwise, a proper function cannot be guaranteed.

6 Cleaning / Maintenance

External contamination can be removed with soap solution or isopropanol. Otherwise, the Biomaster is maintenance-free!

7 Service / 8 Ordering information

7 Service

If defective, the Biomaster can be returned to your distributor for repair.

8 Ordering information

Biomaster Kit	
1 Biomaster (1 - 20 µl) and 1 box with 96 Mastertips	4830 000.017
Mastertips, tips plus piston, mounted ready for use, autoclavable	
5 boxes each with 96 tips	0030 001.320
Pipette carousel (incl. 6 pipette supports)	3115 000.003
Pipette holder (replacement for stand)	3115 600.019
Pipette holder (with adhesive surface for attachment to lab benches and wall)	3115 000.020

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