

MixMate® - Tube Holder

Instructions for use

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1 Operating instructions

1.1 Using this manual

Before using the Tube Holder for the first time, please read these instructions for use and also the operating manual of the MixMate. You can find the current version of the operating manual on the Internet at www.eppendorf.com.

These instructions for use are a supplement to the operating manual of the MixMate. These instructions for use do not replace the operating manual.

2 Safety

2.1 Intended use

The Eppendorf tube holder is used to hold vessels and plates for mixing samples in the Eppendorf MixMate.

Eppendorf tube holders are meant for indoor use only. All country-specific safety requirements for operating electrical equipment in laboratories must be observed. Only use Eppendorf accessories or accessories recommended by Eppendorf.

The Eppendorf tube holders must only be operated by appropriately qualified and instructed personnel.

The product can be used for training, routine and research laboratories in the areas of life sciences, industry or chemistry. This product is intended to be used for research purposes only. Eppendorf does not provide a warranty for other applications. The product is not suitable for use in diagnostic or therapeutic applications. The product may only be used by skilled personnel who have been trained in the areas mentioned above.

2.2 Warnings for intended use

Read the operating manual. Observe the following safety instructions before using the tube holder.



WARNING! Injury from flying tubes and plates.

If the maximum permitted total weight of the mixing load is exceeded, plates or tubes may become detached from the device.

- ▶ Always ensure that tubes and tube holders are well-seated.



WARNING! Injury from sample material being thrown out.

Sample material can be thrown out of open, improperly sealed or unstable tubes and plates.

- ▶ Only mix in closed tubes and closed plates.
- ▶ Observe the nationally prescribed safety environment when working with hazardous, toxic and pathogenic samples. Pay particular attention to personal protective equipment (gloves, clothing, goggles etc.), extraction, and the biosafety level of the lab.



WARNING! Damage to people or items due to chemically- or mechanically-damaged tube holders.

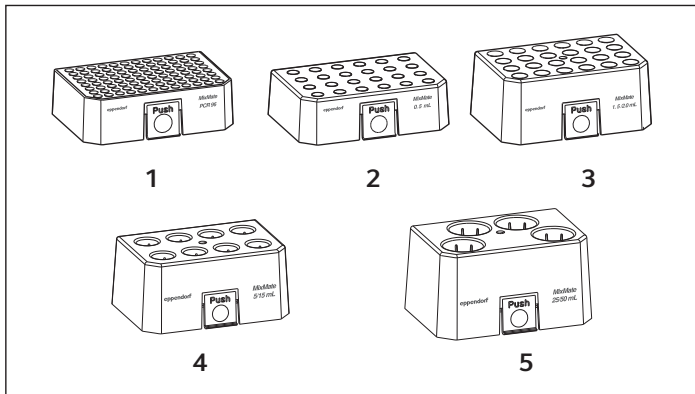
- ▶ Do not use mechanically-damaged tube holders.
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3 Product description

3.1 Features

The tube holder is used together with the MixMate.

The tube holders are used for mixing PCR plates 96, micro test tubes (0.5 mL; 1.5 mL; 2.0 mL; 5.0 mL and 25 mL) and conical tubes (5 mL, 15 mL, 25 mL and 50 mL).



1 PCR 96 tube holder

For a PCR plate (96-well, semi-skirted or unskirted) or 96 micro test tubes (0.2 mL).

2 0.5 mL tube holder

For 24 micro test tubes (0.5 mL).

3 1.5/2.0 mL tube holder

For 24 micro test tubes (1.5 and 2.0 mL).

4 5/15 mL tube holder

For 8 micro test tubes (5 mL or 15 mL)

5 25/50 mL tube holder

For 4 conical tubes (25 mL and 50 mL) or 4 micro test tubes (25 mL)

Tube holder	Maximum mixing frequency
PCR 96	2000 rpm
0.5 mL	2000 rpm
1.5/2.0 mL	2000 rpm
5/15 mL	1000 rpm
25/50 mL	1000 rpm

4 Installation and operation

4.1 Inserting plates and tubes



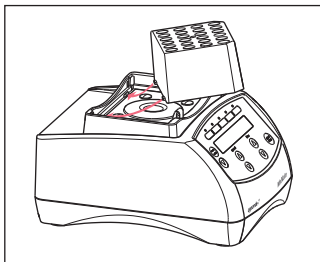
WARNING! Injury from flying tubes and plates.

If the maximum permitted total weight of the mixing load is exceeded, plates or tubes may become detached from the device.

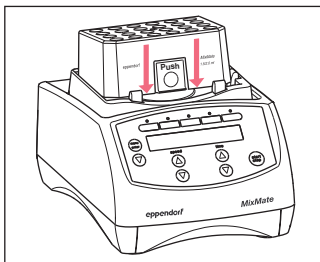
- ▶ Always ensure that tubes and tube holders are well-seated.

Plate/tube	Tube holder				
	PCR 96	0.5 mL	1.5/2.0 mL	5/15 mL	25/50 mL
0.2 mL PCR tubes	+				
0.5 mL PCR tubes		+			
0.5 mL micro test tubes		+			
1.5 mL micro test tubes			+		
2.0 mL micro test tubes			+		
25 mL micro test tubes					+
5 mL conical tubes				+	
15 mL conical tubes				+	
25 mL conical tubes					+
50 mL conical tubes					+

4.1.1 Insert the tube holder in the plate holder



1. Select the appropriate tube holder (see table above).
2. Hold the tube holder up against the back edge of the plate holder so that the stop pins fit in the holes.



- Engage the tube holder by pressing gently on the front.
- After use, release the tube holder with a light push on the release button **Push**.

4.1.2 Insert tubes in the tube holders

- Select the appropriate tube holder (see table above).
- Insert the tubes completely into the bores of the tube holder.

4.2 Mixing



WARNING! Injury from sample material being thrown out.

Sample material can be thrown out of open, improperly sealed or unstable tubes and plates.

- ▶ Only mix in closed tubes and closed plates.
- ▶ Observe the nationally prescribed safety environment when working with hazardous, toxic and pathogenic samples. Pay particular attention to personal protective equipment (gloves, clothing, goggles etc.), extraction, and the biosafety level of the lab.



The maximum mixing frequency for 5/15 mL and 25/50 mL tube holders is 1000 rpm.

The MixMate features an automatic overload protection. If the selected speed is too high for the materials to be mixed or the tube holder is not securely inserted in the plate holder, a signal tone will sound. The MixMate automatically reduces the speed to 1400 rpm. The display alternately shows the messages *TOO FAST* and *1400 rpm*.

- Press the **start/stop** key to end the mixing process.
- To deactivate the error message, press the **start/stop** key a second time.

5 Maintenance

5.1 Cleaning



NOTICE! Damage from the use of aggressive chemicals.

- ▶ Do not use any aggressive chemicals on the device or its accessories, such as strong and weak bases, strong acids, acetone, formaldehyde, halogenated hydrocarbons or phenol.
- ▶ If the device has been contaminated by aggressive chemicals, clean it immediately using a mild cleaning agent.



NOTICE! Corrosion due to aggressive cleaning agents and disinfectants.

- ▶ Do not use any corrosive cleaning agents, aggressive solvents or abrasive polishes.
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Auxiliary equipment

- Lint-free cloth
- Soft bottle brush or cotton swabs
- Mild soap-based laboratory cleaner
- Dist. water

Clean the tube holder immediately if sample fluid enters the bore holes or comes into contact with the surfaces.

1. Clean the tube holder with a mild soap solution. Clean the bores with a soft bottle brush or cotton swabs.
2. Rinse off the soap solution with dist. water.
3. Let the cleaned tube holder dry with the bores pointing downwards. Do not dry tube holders in a drying cabinet.

5.2 Disinfection/decontamination



WARNING! Risk to health due to contaminated accessories.

1. Observe the information in the decontamination certificate. It is available as a PDF document on our webpage (www.ependorf.com/decontamination).
 2. Decontaminate all the parts you want to send.
 3. Include the fully completed decontamination declaration for product returns in the shipment.
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- ▶ Select a disinfection method complying with the statutory rules and regulations for your area of application. Use e.g. alcohol (ethanol, isopropanol) or alcohol-containing disinfectants.

Evaluate Your Manual