eppendorf

Eppendorf Tubes®

Instructions for use

DOMINIQUE DUTSCHER SAS

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1 Safety

1.1 Intended use

Eppendorf Tubes are single-use tubes made from polypropylene for preparing, mixing, centrifuging, transporting and storing solid and liquid samples and reagents.

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.

1.2 Safety notes

WARNING! Damage to health from toxic, radioactive or aggressive chemicals as well as infectious liquids and pathogenic germs.

- Observe the national regulations for handling these substances, the biological security level of your laboratory, the material safety data sheets and the manufacturer's application notes.
- Wear personal protective equipment.
- For comprehensive regulations about handling germs or biological material of risk group II or higher, please refer to the "Laboratory Biosafety Manual" (source: World Health Organization, Laboratory Biosafety Manual, in its respectively current valid version).

WARNING! Risk to health from escaping substances.
If the tube lids are not sealed properly or the lip seal is damaged, the tube lid may burst open at increased temperatures.

- Only use optically perfect and undamaged reaction tubes.
- Close the tubes properly. Do not damage the seal lip.
- Observe the maximum filling volume. When opening the tubes, liquid at the lid may splash out.
- Make the necessary safety arrangements for transport or storage to prevent material escaping from the tube.
- Do not use the tubes with liquid nitrogen. The operating temperature ranges from -86°C to +100°C. If the tubes were frozen in liquid nitrogen, the tube lids may open up during thawing.

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WARNING! Risk of contamination from damaged tubes during centrifugation.
The tubes are subjected to strong forces during centrifugation. If used incorrectly, the tubes may be destroyed. The tube contents may be accidentally released.

- Close tube lids before commencing centrifugation. Open tube lids can break off during centrifugation and damage the centrifuge.
- Observe the maximum permitted centrifugation forces.
- Read the operating manual of the centrifuge used.
- Please note that organic solvents can reduce the mechanical resistance of the tubes. In case of doubt, contact the Eppendorf Application Support (support@eppendorf.com).

WARNING! Risk of contamination from multiple use.
Consumables are intended for single-use only.

- After use, dispose of consumables in accordance with the substances with which they have come into contact.

WARNING! Risk of contamination
Tubes are only sterile in closed packaging. After five years the shelf life expires even in closed packaging.

- Only open the packaging immediately before use.
- Observe the expiry date printed on the packaging.

CAUTION! Risk of contamination when disposing of used consumables.

- Dispose of used consumables in accordance with the substances with which they have come into contact.
- Observe the rules applicable to your lab.

NOTICE! Material damage from incorrect use.

- Only use the product for its intended purpose as described in the operating manual.
- Ensure adequate material resistance when using chemical substances.
- In case of doubt, contact the manufacturer of this product.

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2 Product description

Eppendorf Tubes are available in the following product variations:

- Eppendorf Safe-Lock Tubes: tubes with lid latch for additional protection against unintentional opening during tempering.
- Eppendorf Tubes 3810X and Flex-Tubes: standard tubes which meet high requirements with regard to relative centrifugal force, temperature and chemical resistance. They are easy to open and close.

Eppendorf Tubes are available in different purity grades (see p. 7).

Eppendorf Tubes are equipped with a graduation as an indicator for the filling quantity and a labeling area for identification.

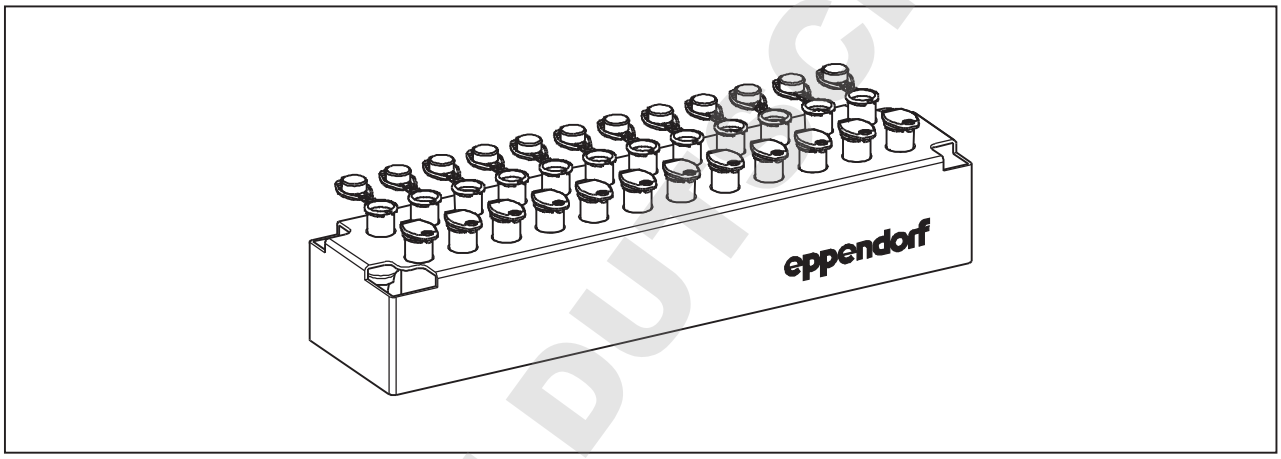

Fig. 2-1: Tubes in a 1.5/2.0 mL tube rack

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3 Technical data

Material:	Polypropylene (colored, colorless)
Storage before use:	Protect from direct sunlight and UV light. Store in dry conditions at room temperature.
Chemical resistance:	refer to application no. 56: “The best material for original Eppendorf Tubes® and plates: properties and chemical resistance of polypropylene"
Operating temperature:	-86 °C - 100 °C
Autoclavable:	when opened, 121 °C, 20 min

3.1 Centrifugation stability

The resistance to centrifugation of consumables generally depends on the following conditions:

- Properties of the consumable (e.g., material, shape)
- Combination of centrifuge, rotor and, if applicable, adapter
- Accuracy of fit of the consumable in the rotor bore or adapter
- Centrifugation parameters (speed/*g*-force, temperature, centrifugation time)
- Overall weight of consumable and contents
- Physical and chemical properties of the centrifuged liquid

▶ Perform a test run to define the suitable conditions for your application.

NOTICE! Micro test tubes heat up.
In uncooled centrifuges, the temperature in the rotor chamber, rotor and sample can increase to above 40 °C, depending on the run time, *g*-force (rcf)/speed and ambient temperature.

▶ Please note that this will reduce the resistance to centrifugation of the micro test tubes.

▶ Please note the temperature resistance of the samples.

The mechanical strength of the tubes is reduced by the use of organic solvents. In case of doubt, contact Eppendorf Application Support.

The tubes can be centrifuged with the maximum g-forces (rcf) listed in the table below under the following conditions:

- Eppendorf Tubes in a 45° fixed-angle rotor
- Sample temperature with aqueous saline solution 40 °C
- when using suitable centrifuge adapters for 90 min

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Tube		Eppendorf Quality, PCR-clean, DNA LoBind	Biopur, sterile	Protein LoBind
Eppendorf Tubes	0,5 mL	30,000 × *g*	22,000 × *g*	18,000 × *g*
	1,5 mL	30,000 × *g*	22,000 × *g*	18,000 × *g*
	2,0 mL	25,000 × *g*	22,000 × *g*	18,000 × *g*
Eppendorf Tubes 3810X	1,5 mL	30,000 × *g*	–	

3.2 Eppendorf purity grades

	Eppendorf Quality	**Sterile**	**PCR clean**	**Sterile + PCR clean**	**Biopur**
	eppendorf guaranteed quality	eppendorf sterile certified purity grade	eppendorf PCR clean certified purity grade	eppendorf sterile certified purity grade eppendorf PCR clean certified purity grade	eppendorf biopur certified purity grade
Batch testing (certified) for the following purity criteria					
Free of human DNA			■	■	■
DNA-free (free of human and bacterial DNA)					■
DNase-free			■	■	■
RNase-free			■	■	■
Free of PCR inhibitors			■	■	■
ATP-free					■
Pyrogen-free (endotoxin-free)		■		■	■
Sterile (Ph.Eur./UPS)		■		■	■

Batch-specific certificates on the Internet at: www.eppendorf.com/certificates.

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4 Ordering information

4.1 Spare parts

Order no. (International)	Description
	Eppendorf Safe-Lock Tubes 0.5 mL 500 pieces
0030 121.023	clear
	Eppendorf Safe-Lock Tubes 1.5 mL 1,000 pieces, clear
0030 120.086	Eppendorf Quality
	Eppendorf Safe-Lock Tubes 2.0 mL 1,000 pieces, clear
0030 120.094	Eppendorf Quality
	Eppendorf Safe-Lock Tube 0.5 mL 500 pieces
0030 121.708	assortment
0030 121.112	yellow
0030 121.120	red
0030 121.139	blue
0030 121.147	green
0030 121.155	amber
	Eppendorf Safe-Lock Tube 1.5 mL 1,000 pieces
0030 121.694	assortment
0030 120.159	yellow
0030 120.167	red
0030 120.175	blue
0030 120.183	green
0030 120.191	amber
	Eppendorf Safe-Lock Tube 2.0 mL 1,000 pieces
0030 121.686	assortment
0030 120.205	yellow
0030 120.213	red
0030 120.221	blue
0030 120.230	green
0030 120.248	amber
	Eppendorf Safe-Lock Tube 0.5 mL 50 pieces
0030 121.570	Biopur, individually sealed

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Order no. (International)	Description
0030 121.589	**Eppendorf Safe-Lock Tube 1.5 mL** 100 pieces Biopur, individually sealed
0030 121.597	**Eppendorf Safe-Lock Tube 2.0 mL** 100 pieces Biopur, individually sealed
0030 123.301	**Eppendorf Safe-Lock Tube 0.5 mL** 500 pieces, clear PCR clean
0030 123.328	**Eppendorf Safe-Lock Tube 1.5 mL** 1,000 pieces, colorless PCR clean
0030 123.344	**Eppendorf Safe-Lock Tube 2.0 mL** 1,000 pieces, colorless PCR clean
0030 125.150	**Micro test tube 3810X 1.5 mL** 1,000 pieces clear
0030 125.215	**Micro test tube 3810X 1.5 mL** 1,000 pieces, clear PCR clean
0030 108.094	**Eppendorf Protein LoBind Tubes 0.5 mL** PCR clean, 100 pieces
0030 108.116	**Eppendorf Protein LoBind Tubes 1.5 mL** PCR clean, 100 pieces
0030 108.132	**Eppendorf Protein LoBind Tubes 2.0 mL** PCR clean, 100 pieces
0030 108.035	**Eppendorf DNA LoBind Tubes 0.5 mL** PCR clean, 250 pieces
0030 108.051	**Eppendorf DNA LoBind Tubes 1.5 mL** PCR clean, 250 pieces
0030 108.078	**Eppendorf DNA LoBind Tubes 2.0 mL** PCR clean, 250 pieces

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