



## Eppendorf Tubes®

**Instructions for use**

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## 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 field of application is training, routine and research laboratories in the areas of life sciences, industry, medical and pharmaceutical research and, chemistry.

Operation requires skilled personnel who have been trained for the above mentioned areas.

## 2 Safety notes

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**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.



**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.
- ▶ Seal the reaction tubes correctly. 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 the transport or storage outside of the laboratory to prevent materials escaping from the tube.
- ▶ The tubes must not be used 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.



**WARNING! Risk of contamination from damaged tubes during centrifugation.**

The tubes withstand heavy loads during centrifugation. However, they can be destroyed and release the substances they contain if used improperly.

- ▶ Close tube lids before commencing centrifugation. Open tube lids can break off during centrifugation and damage the centrifuge.
- ▶ Always 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. If in doubt, please contact the Eppendorf Application Support (support@eppendorf.com).



**WARNING! Risk of contamination from multiple use.**

The tubes are intended for single use only.

- ▶ Dispose of used tubes in accordance with the substances with which they have come into contact.



**WARNING! For sterile packaging: Risk of contamination due to limited sterility of the tubes.**

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.



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**CAUTION! Contamination risk 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 any doubts, turn to the manufacturer of this product.

### 3 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. 8).

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

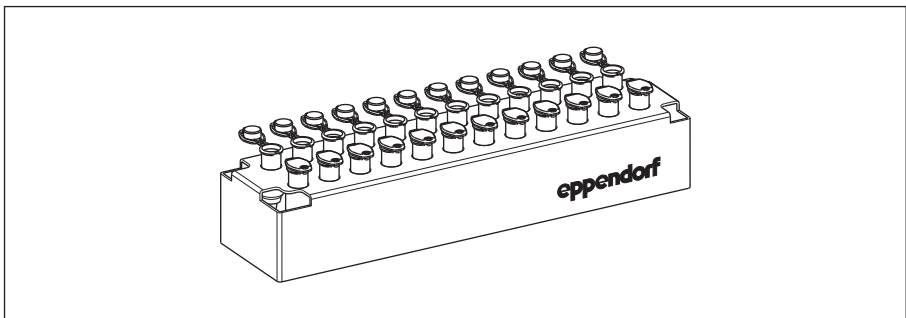


Fig. 3-1: Tubes in a 1.5/2.0 mL tube rack

## 4 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

### 4.1 Maximum values for centrifuging



#### **NOTICE! Tubes will get hot.**

Depending on the the run time, *g*-force (rcf)/speed (rpm) and ambient temperature, the temperature in the rotor chamber, rotor and in the sample can increase to more than 40 °C.

- ▶ Please note that the resistance to centrifugation of the tubes will reduce.
- ▶ Please note the temperature resistance of the samples.

#### **Can be centrifuged at 4 °C – 40 °C**






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

- in a 45° fixed-angle rotor
- sample temperature of 40 °C with aqueous saline solution (1.0 g/mL density)
- when using suitable centrifuge adapters for 90 min

Vessel		Eppendorf Quality, PCR-clean, DNA LoBind	Biopur, sterile	Protein LoBind
Eppendorf Safe-Lock Tubes	0.5 mL	30,000 × <i>g</i>	22,000 × <i>g</i>	18,000 × <i>g</i>
	1,5 mL	30,000 × <i>g</i>	22,000 × <i>g</i>	18,000 × <i>g</i>
	2.0 mL	25,000 × <i>g</i>	22,000 × <i>g</i>	18,000 × <i>g</i>
Eppendorf 3810X Tubes	1.5 mL	30,000 × <i>g</i>	–	

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

## 4.2 Eppendorf purity levels

	<b>Eppendorf Quality</b> 	<b>Sterile</b> 	<b>PCR clean</b> 	<b>Sterile + PCR clean</b> 	<b>Biopur</b> 
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### Lot testing (certified) for the following purity criteria

Human-DNA-free			■	■	■
DNA-free (Human + Bacteria-DNA-free)					■
DNase-free			■	■	■
RNase-free			■	■	■
PCR-Inhibitor-free			■	■	■
ATP-free					■
Pyrogen-free (Endotoxin-free)		■		■	■
Sterile (Ph.Eur./USP)		■		■	■

**Eppendorf Protein LoBind and DNA LoBind:** consumables with the highest recovery rates for proteins and DNA and RNA molecules. They are PCR clean, i.e. free from RNase, DNase, human DNA and PCR inhibitors.



## 5 Ordering Information

### 5.1 Spare parts

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

**Ordering Information**

Eppendorf Tubes®

English (EN)

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



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