



Reaction vessels Eppendorf Tubes®

Instructions for Use

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1 About this manual

1.1 About this manual

Pay attention to the corresponding operating manuals when using this product in combination with other products or devices. This document does not replace the instructions for use provided with other products or devices.

1. Before using the product, read this document in full.
2. Please ensure that you have this document available when using the product.

2 Safety

2.1 Intended use

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

The products can be used for training, routine and research laboratories in the life sciences, industrial or chemical sectors. The products may only be used by trained and skilled personnel who have been trained in the sectors mentioned above.

2.2 Personal protective equipment

The personal protective equipment ensures the safety and protection of the users working on the device.

Personal protective equipment must comply with country-specific regulations and the regulations of the laboratory.

2.3 Residual risks when used as intended

If the product is not used as intended, the installed safety devices may not function correctly. To reduce the risk of personal injury and material damage and to avoid dangerous situations, please observe the general safety instructions.

2.3.1 Personal injury

2.3.1.1 Biological hazards

Pathogenic biological agents can harm your health and the environment.

- Observe the national regulations and the biosafety level of your laboratory.
- Wear suitable personal protective equipment.
- Observe the Safety Data Sheets and instructions for use for the accessories.
- For instructions regarding the handling of germs and biological material in risk group II or above, please refer to the "Laboratory Biosafety Manual" (source: World Health Organization, Laboratory Biosafety Manual, check the most current edition).

If the tube lids are not closed properly or the sealing lips are damaged, the tube lids may spring open at elevated temperatures.

- Only use visually perfect and undamaged reaction vessels.
- Close the tubes properly. Do not damage the sealing lip.
- Observe the maximum filling volume.
- When opening the tubes, liquid on the lid may splash out.
- Use a clip for tubes with a snap cap if the tube is heated > 80 °C.

- Take appropriate safety precautions during transport and storage to prevent the contents of the tube from escaping.
- Do not use the tubes in liquid nitrogen. The operating temperature ranges from -86 °C to +100 °C. The tube lids may spring open when thawing.

Tubes may be destroyed. The contents of the tube may be released.

- Note the height and diameter of the tube. Only use suitable centrifuge inserts or mixer thermoblocks.
- If necessary, use the adapters provided.

During centrifugation, the tubes are exposed to great stress. If used incorrectly, the tubes may be destroyed. The contents of the tube may be released.

- Close the tube lids before centrifugation. Open tube lids may break off during centrifugation and damage the centrifuge.
- Observe the maximum permitted centrifugation forces.
- Read the operating manual provided for the centrifuge used.
- Please note that organic solvents can reduce the mechanical strength of the tubes. In case of doubt, contact Eppendorf Application Support support@eppendorf.com.
- Always use 5 mL universal adapters when centrifuging 5 mL Tubes in 15 mL rotor bores.

Consumables are intended for single use only.

- After use, dispose of consumables in accordance with the substances with which they have come into contact.
- Observe the rules that apply to your laboratory.

Consumables are only sterile in sealed packing.

- Check that the packing is undamaged.
- Observe the expiry date printed on the label.
- Only open the packing immediately before use.
- Only use visually perfect items.
- Do not use liquid nitrogen. Consumables may be damaged or seals may burst when thawing.

2.3.2 Material damage

2.3.2.1 Material damage

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

Safety

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3 Product description

3.1 Overview

Eppendorf Tubes are available in the following product versions:

- Eppendorf Safe-Lock Tubes
tubes with lid latch for additional protection against unintentional opening during tempering.
- Eppendorf Tubes 3810X and Flex-Tubes
standard tubes that meet high requirements in terms of centrifugation stability, temperature and chemical resistance. They are easy to open and close.

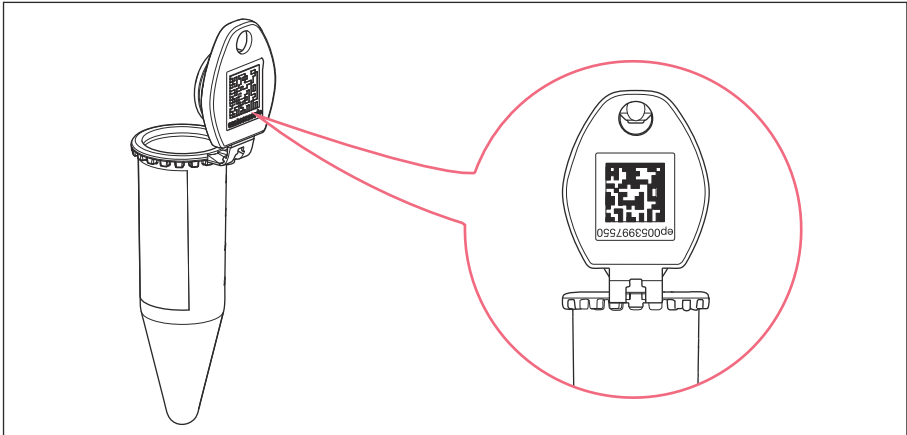
The tubes are available in different purity grades.

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

3.2 SafeCode Consumables

These single-use tubes are available as a barcoded SafeCode version. You can access all available information on these single-use tubes (including lot numbers) for specific IDs via the Eppendorf webpage.

SafeCode position




DataMatrix code

A DataMatrix code is used for coding. For its DataMatrix codes, Eppendorf uses the Reed-Solomon error correction algorithm, known as ECC200 (error correcting code). The ECC200 DataMatrix symbology ensures that codes where up to 25 % of the code area is unreadable are also read. This code is unique within the Eppendorf Consumables portfolio and allows unambiguous sample identification. The use of SafeCode Consumables is also facilitated by the plain text (human readable code).

SafeCodes

For the SafeCode Consumables, the ep-unique ID SafeCode system is used. The ep-unique ID SafeCode is a number assigned by Eppendorf that is unique for each Eppendorf Consumable.

Characteristic	ep-unique ID SafeCode
DataMatrixFormat	14 × 14
Structure	<div><div>ep-unique ID</div><div>ep1234567890</div></div> ep + 10 digits
Availability	From stock
Code type	Data Matrix, ECC200
Uniqueness	Unique for each Eppendorf Consumable
ISO standard	ISO/IEC 16022




SafeCodes may become damaged and illegible due to scratching, fading, autoclaving and other influences.

SafeCode Consumables are not suitable for autoclaving. Autoclaving damages the SafeCode and can result in a loss of information.

Using the SafeCode consumables

Check the compatibility of your system (reading device and software) before using the various SafeCode Consumables.

Also check whether data is transmitted without error in your systems.



Multiple use of SafeCode Consumables leads to inconsistent data and can result in information loss and sample mix-up. Assess the consequences of information loss or sample mix-up and implement risk minimization mechanisms, if necessary.

DataPort

A complete description of the tubes including lot number, technical data, certificates and other information can be found on our webpage at www.eppendorf.com/certificates (Service & Support > Quality and Certificates > Certificates).

4 Technical data

Material	Polypropylene (colored, colorless)
Storage before use	Protect from direct sunlight and UV light. Store dry at ambient temperature.
Chemical resistance	See Application No. 56: The best material for original Eppendorf Tubes® and Plates at www.eppendorf.com
Operating temperature	-86 °C to 100 °C
Autoclavability	when open 121 °C, 20 min

4.1 Centrifugation stability

The centrifugation stability 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 consumables and contents
- Physical and chemical properties of the centrifuged liquid



- Perform a test run to determine the suitable conditions for your application.
- The mechanical strength of the tubes is reduced by the use of organic solvents. In case of doubt, please contact Eppendorf Application Support.



NOTICE!

In non-refrigerated 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.






- Note that this will reduce the centrifugation stability of the reaction vessels.
- Note the temperature resistance of the samples.

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

- Centrifugation in a 45° fixed-angle rotor
- Sample temperature of 40 °C with aqueous saline solution (≤ 1.0 g/mL density)
- Use of suitable centrifuge adapters
- Centrifugation time: 90 min

Tube		Eppendorf Quality, PCR-clean, DNA LoBind, with Safe- Code	Biopur, sterile	Protein LoBind
Eppendorf Tubes	0.5 mL	30,000 × g	22,000 × g	18,000 × g
	1.5 mL	30,000 × g		
	2.0 mL	25,000 × g		
Eppendorf Tubes 3810X	1.5 mL	30,000 × g	-	-

4.2 Eppendorf purity grades

	Eppen- dorf Quality	Sterile	PCR clean		Biopur
					

Batch testing (certified) for the following purity criteria:

Human-DNA-free			■	■	■
DNA-free (free of human and bacterial DNA)					■
DNase-free			■	■	■
RNase-free			■	■	■
PCR-Inhibitoren-free			■	■	■
ATP-free					■

	Eppen- dorf Quality	Sterile	PCR clean		Biopur
Pyrogen-free (endo- toxin-free)		■		■	■
Sterile (Ph.Eur./USP)		■		■	■

Batch-related certificates are available online at: www.eppendorf.com/certificates.

5 Ordering information

5.1 Ordering information

Description	Order no.
DNA LoBind® Tubes	
snap cap, DNA LoBind®, 0.5 mL PCR clean, colorless, 250 tubes (5 bags × 50 tubes)	0030 108 035
snap cap, DNA LoBind®, 1.5 mL PCR clean, colorless, 250 tubes (5 bags × 50 tubes)	0030 108 051
snap cap, DNA LoBind®, 2.0 mL PCR clean, colorless, 250 tubes (5 bags × 50 tubes)	0030 108 078
Eppendorf Safe-Lock Tubes	
1.5 mL, 2D SafeCode PCR clean, colorless, 500 tubes (10 bags × 50 tubes)	0030 113 403
2.0 mL, 2D SafeCode PCR clean, colorless, 500 tubes	0030 113 446
1.5 mL Eppendorf Quality, colorless, 1,000 tubes. Replaces order no. 0030121872.	0030 120 086
Eppendorf Quality, yellow, 1,000 tubes	0030 120 159
Eppendorf Quality, red, 1,000 tubes	0030 120 167
Eppendorf Quality, blue, 1,000 tubes	0030 120 175
Eppendorf Quality, green, 1,000 tubes	0030 120 183
PCR clean, amber (light protection), 1,000 tubes	0030 120 191
Biopur®, colorless, 100 tubes, individually packed	0030 121 589
Eppendorf Quality, assorted colors (per 200), 1,000 tubes	0030 121 694
PCR clean, colorless, 1,000 tubes	0030 123 328
2.0 mL Eppendorf Quality, colorless, 1,000 tubes. Replaces order no. 0030121880.	0030 120 094
Eppendorf Quality, yellow, 1,000 tubes	0030 120 205
Eppendorf Quality, red, 1,000 tubes	0030 120 213

Ordering information

Eppendorf Tubes®
English (EN)

Description	Order no.
Eppendorf Quality, blue, 1,000 tubes	0030 120 221
Eppendorf Quality, green, 1,000 tubes	0030 120 230
PCR clean, amber (light protection), 1,000 tubes	0030 120 248
Biopur®, colorless, 100 tubes, individually packed	0030 121 597
Eppendorf Quality, assorted colors (per 200), 1,000 tubes	0030 121 686
PCR clean, colorless, 1,000 tubes	0030 123 344
0.5 mL	
Eppendorf Quality, colorless, 500 tubes. Replaces order no. 0030121503.	0030 121 023
Eppendorf Quality, yellow, 500 tubes	0030 121 112
Eppendorf Quality, red, 500 tubes	0030 121 120
Eppendorf Quality, blue, 500 tubes	0030 121 139
Eppendorf Quality, green, 500 tubes	0030 121 147
PCR clean, amber (light protection), 500 tubes	0030 121 155
Biopur®, colorless, 50 tubes, individually packed	0030 121 570
Eppendorf Quality, assorted colors (per 100), 500 tubes	0030 121 708
PCR clean, colorless, 500 tubes	0030 123 301
Eppendorf Tubes® 3810X	
1.5 mL, g-safe® centrifugation stability	
Eppendorf Quality, colorless, 1,000 pcs.	0030 125 150
PCR clean, colorless, 1,000 pcs.	0030 125 215
Protein LoBind® Tubes	
snap cap, Protein LoBind®, 0.5 mL	
PCR clean, colorless, 100 tubes (2 bags × 50 tubes)	0030 108 094
snap cap, Protein LoBind®, 1.5 mL	
PCR clean, colorless, 100 tubes (2 bags × 50 tubes)	0030 108 116
snap cap, Protein LoBind®, 2.0 mL	
PCR clean, colorless, 100 tubes (2 bags × 50 tubes)	0030 108 132



www.eppendorf.com

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