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DOMINIQUE DUTSCHER

Eppendorf Conical Tubes 5 mL, 15 mL, 25 mL and 50 mL

Instructions for Use

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1 Safety

1.1 Intended use

Eppendorf Conical Tubes 5 mL/15 mL/25 mL/50 mLare single-use tubes made from polypropylene 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 areas of life sciences, industry or chemistry. The products are intended to be used for research purposes only. Eppendorf does not provide a warranty for other applications. The products are not suitable for use in diagnostic or therapeutic applications. The products may only be used by skilled personnel who have been trained in the areas mentioned above.

1.2 Warnings for intended use



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

- Observe the national regulations for handling these substances, the biosafety level of your laboratory, and the manufacturers' Safety Data Sheets and application notes.
- Wear your personal protective equipment.
- Consult the "Laboratory Biosafety Manual" (source: World Health Organization, Laboratory Biosafety Manual, as amended) for comprehensive regulations on the handling of germs or biological material of risk group II or higher.



WARNING! Damage to health due to bursting tubes.
When used with liquid nitrogen, tubes can burst.

- Do not use the tubes with liquid nitrogen.
- Only use the tubes within the intended operating temperature range of -86 °C to +100 °C.

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WARNING! Damage to health due to escaping substances.
Foaming or gas-forming liquid samples can escape if:

- The tube lid is not correctly closed.
- The sealing area is damaged.
- The tube is filled to more than the permissible nominal volume.

▸ Only use visually perfect and undamaged tubes.
▸ Close the tubes properly. Do not damage the sealing area in doing so.
▸ Observe the maximum filling volume.
▸ Make the necessary safety arrangements for transport or storage.



NOTICE! Sample loss due to incorrect equipment
Note that using Eppendorf Conical Tubes in the incorrect equipment (e.g., the incorrect rotor/adapter or mixer insert) can destroy the tubes and thus cause the contents of the tubes to be released.

▸ Note the height and diameter of the tubes. Use only suitable centrifuge inserts or mixer thermoblocks.
▸ Use the adapters provided for the Eppendorf Conical Tube.



WARNING! Sample loss during centrifugation.
During centrifugation, the tubes are subjected to great stress. This can be large g-forces or, in uncooled centrifuges, temperatures above 40 °C (rotor chamber, rotor, sample). The tubes can be destroyed if used incorrectly and the substances they contain can escape.

▸ Close the tube lid correctly before centrifuging.
▸ Observe the maximum permitted centrifugation temperature.
▸ Observe the maximum permitted centrifugation forces.
▸ Read the operating manual for the centrifuge used.
▸ Note that organic solvents can reduce the mechanical strength of the tubes.
▸ To determine the maximum centrifugation stability for your applications, carry out a sample run with lower centrifugation forces.

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WARNING! Risk of contamination from multiple use.
Note that multiple use of the micro test tubes may contaminate the samples which will render them unusable.

- The tubes are intended for single use only.
- After single use, dispose of consumables in accordance with the disposal requirements for the substances and samples with which they have come into contact.
- Observe your laboratory's regulations.

NOTICE! Loss of information
Missing or faulty barcodes can lead to sample loss or mix-up.

- Assess the consequences of a possible loss of information.

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2 Product description

2.1 Features

Eppendorf Conical Tubes 5 mL/15 mL/25 mL/50 mL meet high endurance requirements for centrifugation as well as temperature and chemical resistance. They are equipped with a screw cap. The graduation indicates the filling quantity and the labeling area identifies the contents.

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3 BioBased Consumables

BioBased Consumables are single-use vessels made of bio-based raw materials. The polypropylene comes from renewable sources (e.g., waste or residues of vegetable oils) that are reprocessed and put to a new use.

These products have the same quality and performance features as Eppendorf single-use vessels made of fossil raw materials.

The processed quantities of bio-based raw materials are declared and subjected to inspection by an independent system. As a participant in this system, Eppendorf is certified.

You can find information on the bio-based raw material content according to the mass balance approach on the label of the direct packing.

For further information refer to the respective product pages at www.eppendorf.com.

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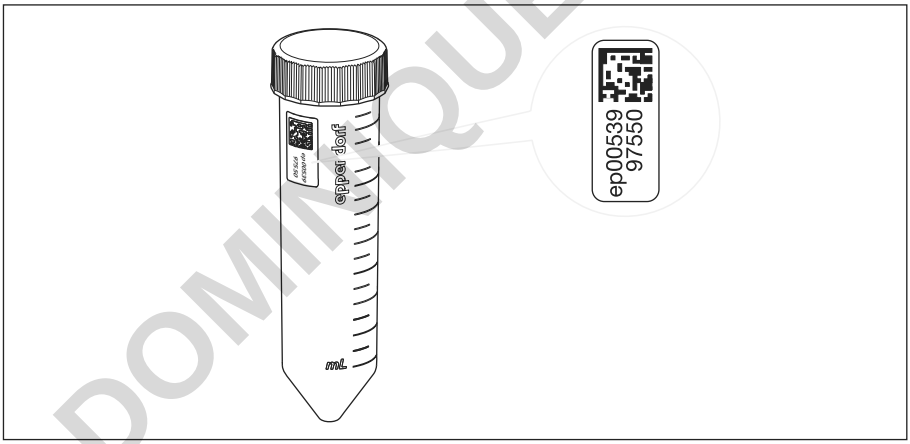
4 SafeCode consumables

These single-use tubes are available as a barcoded SafeCode variant. You can access all available information on these single-use tubes (including lot numbers) on the Eppendorf website based on their IDs.

4.1 DataMatrix code

Coding is done with a DataMatrix code. Eppendorf uses the Reed-Solomon algorithm for error correction, known as ECC200 (error correcting code), for its DataMatrix codes. The ECC200 DataMatrix-symbology ensures that even codes with an up to 25 % unreadable code area are read. This coding is unambiguous within the Eppendorf consumables portfolio and enables clear sample identification. In addition, the plain text (human-readable code) makes using the SafeCode consumables even easier.

4.2 SafeCode position on tubes with screw caps



On tubes with screw caps, the SafeCode is attached to the tube. This prevents confusing the samples when exchanging tube lids.

4.3 SafeCodes

Two different code systematics are used on the SafeCode consumables:

- ep-unique ID SafeCode
- global-unique ID SafeCode

The ep-unique ID SafeCode is a number assigned by Eppendorf which is unique for each Eppendorf Consumable.

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The global-unique ID SafeCode consists of a Global Trade Item Number (GTIN) and the ep-unique ID. The GTIN is an international, unique number for the identification of products. It is managed and assigned globally by Global Standards One (GS1).

Feature	ep-unique ID SafeCode	global-unique ID SafeCode
Format	14×14	18×18
Configuration	ep + 10 numbers	(01) + 14 numbers + (21) + 10 numbers
Availability	Ex stock	Contact your local Eppendorf partner
Code type	Data Matrix, ECC200	GS1-128 Data Matrix, ECC200
Uniqueness	Unique for each Eppendorf Consumable	Globally unique for each product
ISO standard	ISO/IEC 16022	ISO/IEC 16022, ISO/IEC 15418

SafeCodes can become unreadable due to damage (scratching, bleaching, autoclaving, etc.), which may result in loss of information.

Do not autoclave SafeCode consumables. Autoclaving will damage the SafeCode, which may result in loss of information.

4.4 Using the SafeCode consumables

Check your system's compatibility (scanner and software) before using the various SafeCode consumables.

Also ensure error-free data transmission within your systems.

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

4.5 DataPort

A complete product description with lot number, technical data, certificates and other information can be found on our website at www.eppendorf.com/certificates (Service & Support > Quality and Certificates > Certificates).

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5 Technical data

Screw cap	5 mL	15 mL	25 mL	50 mL
Maximum operating temperature without mixing	100 °C			
Maximum operating temperature with mixing (maximum 800 rpm)	80 °C			
Maximum filling volume	5 mL	15 mL	25 mL	50 mL
	At maximum filling volume, there may be a slight loss of liquid volume depending on the viscosity of the sample, the temperature and the mixing intensity. Check the test procedure carefully beforehand.			
Storage of samples	4 mL	12 mL	20 mL	40 mL
	Store reaction vessels with sample only in an upright position. The maximum filling volume at low temperatures is 80 % of the nominal volume.			
Storage before use	Protect from sunlight and UV light. Store in a cool, dry place.			
Autoclavability	Not autoclavable.			
Operational temperature	-86 °C – 100 °C			
	The brittleness of LoBind Tubes is increased by storage at cold temperatures. Mechanical stress, e.g., centrifugation at high g-forces, can cause the tubes to break in this condition.			
Material	Tube: polypropylene (PP) Screw cap: high-density polyethylene (HDPE)			
Chemical resistance	See application no. 56: "The best material for original Eppendorf Tubes®" at www.eppendorf.com.			

Drawings with the product dimensions can be found in the download area of the respective Eppendorf product page on our website www.eppendorf.com.

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5.1 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 consumable and contents
- Physical and chemical properties of the centrifuged liquid

▶ Perform a test run to determine which conditions are suitable for your application.

The use of organic solvents reduces the mechanical resistance of the tubes. To determine the maximum centrifugation speed for your applications, perform a test run at a lower g-force.

5.1.1 Eppendorf Conical Tubes with screw cap

- 5 mL 25,000 x g
- 15 mL 19,500 x g
- 25 mL 17,000 x g
- 50 mL 19,500 x g

The specified maximum g-forces apply to all purity grades and all available material variants of the specified tube sizes.

Applied testing conditions:

- Centrifuge 5920R; rotor FA6x50 or centrifuge 5810R; FA-45-6-30
- Centrifugation temperature: 4 °C – 25 °C
- Using suitable rotors and, if necessary, adapters
- Centrifugation time: 90 min
- Sample: aqueous solution and suspensions (density ≤ 1.0 g/mL)

5.1.2 Eppendorf Conical Tubes 5 mL and 25 mL

Use suitable adapters for centrifugation with 5 mL and 25 mL tubes. The specified maximum centrifugation speeds can only be ensured if suitable adapters are used. Further information on centrifugation stability can be found in the corresponding manuals for the centrifugation adapters, if applicable.

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5.2 Eppendorf purity grades

Eppendorf Conical Tubes are available with the following purity grades:

Purity grade / material variants	Standard	DNA LoBind	Protein LoBind	Amber	with SafeCode	BioBased
Eppendorf Quality	5/25					
PCR clean	5/25	5/15/25/50	5/15/25/50	5		
Sterile (Ph. Eur./USP), pyrogen-free (endotoxin-free), DNase-free, RNase-free, DNA-free	5/15/25/50			15/25/50	5/15/50	5/15/25/50
Forensic DNA Grade	5/15/50					

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

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6 Ordering Information

6.1 Eppendorf Tubes 5.0 mL

Order no. (International)	Order no. (North America)	Description
		Eppendorf Tubes 5 mL Screw cap
0030 113.500	0030113500	2D SafeCode, sterile, pyrogen-, DNase-, RNase- und bacteria DNA-free, colorless with 2D SafeCode (DataMatrix/ECC200) and human readable code, 200 Tubes (2 bags x 100 Tubes)
0030 122.305	0030122305	Eppendorf Quality, colorless, 200 Tubes (2 bags × 100 Tubes)
0030 122.313	0030122313	PCR clean, colorless, 200 Tubes (2 bags × 100 Tubes)
0030 122.321	0030122321	sterile, pyrogen-, DNase-, RNase- und DNA-free, colorless, 200 Tubes (2 bags × 100 Tubes)
0030 122.330	0030122330	Ambra (light protection), PCR clean, 200 Tubes (2 bags × 100 Tubes)
0030 122.348	0030122348	DNA LoBind, PCR clean, colorless, 200 Tubes (2 bags × 100 Tubes)
0030 122.356	0030122356	Protein LoBind, PCR clean, colorless, 200 Tubes (2 bags × 100 Tubes)
0030 122.402	0030122402	Forensic DNA Grade, colorless, 200 Tubes (2 bags × 100 Tubes)
0030 122.518	0030122518	BioBased, sterile, pyrogen-, DNase-, RNase- und DNA-free, colorless, 200 Tubes (2 bags × 100 Tubes)

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6.2 Eppendorf Conical Tubes 15 mL

Order no. (International)	Order no. (North America)	Description
		Eppendorf Conical Tubes 15 mL Screw cap
0030 113.489	0030113489	2D SafeCode, sterile, pyrogen-, DNase-, RNase- und bacteria DNA-free, colorless with 2D SafeCode (DataMatrix/ECC200) and human readable code, 500 Tubes (10 bags x 50 Tubes)
0030 122.550	0030122550	sterile, pyrogen-, DNase-, RNase-, and DNA-free, 400 tubes (8 packs x 50 Tubes)
0030 122.160	0030122160	sterile, pyrogen-, DNase-, RNase- und DNA-free, colorless, 500 Tubes (20 Racks x 25 Tubes)
0030 122.577	0030122577	Amber (light protection), sterile, pyrogen-, DNase-, RNase- and DNA-free, 200 Tubes (4 packs x 50 Tubes)
0030 122.585	0030122585	DNA LoBind, PCR clean, 200 Tubes (4 packs x 50 Tubes)
0030 122.593	0030122593	Protein LoBind, PCR clean, 200 Tubes (4 packs x 50 Tubes)
0030 122.259	0030122259	Forensic DNA Grade, colorless, 100 Tubes, individually packaged
0030 122.631	0030122631	BioBased, sterile, pyrogen-, DNase-, RNase- and DNA-free, 400 Tubes (8 packs x 50 Tubes)

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6.3 Eppendorf Conical Tubes 25 mL

Order no. (International)	Order no. (North America)	Description
		Eppendorf Conical Tubes 25 mL Screw cap
0030 122.275	0030122275	DNA LoBind, PCR clean, colorless, 200 Tubes (4 bags × 50 Tubes)
0030 122.283	0030122283	Protein LoBind, PCR clean, colorless, 200 Tubes (4 bags × 50 Tubes)
0030 122.410	0030122410	Eppendorf Quality, colorless, 200 Tubes (4 bags × 50 Tubes)
0030 122.429	0030122429	PCR clean, colorless, 200 Tubes (4 bags × 50 Tubes)
0030 122.437	0030122437	sterile, pyrogen-, DNase-, RNase- und DNA-free, colorless, 200 Tubes (8 bags × 25 Tubes)
0030 122.445	0030122445	Ambra (light protection), sterile, pyrogen-, DNase-, RNase- und DNA-free, 200 Tubes (8 bags × 25 Tubes)
0030 122.534	0030122534	BioBased, sterile, pyrogen-, DNase-, RNase- und DNA-free, colorless, 500 Tubes (20 bags × 25 Tubes)

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6.4 Eppendorf Conical Tubes 50 mL

Order no. (International)	Order no. (North America)	Description
		Eppendorf Conical Tubes 50 mL Screw cap
0030 113.497	0030113497	2D SafeCode, sterile, pyrogen-, DNase-, RNase- und bacteria DNA-free, colorless with 2D SafeCode (DataMatrix/ECC200) and human readable code, 500 Tubes (20 bags x 25 Tubes)
0030 122.569	0030122569	sterile, pyrogen-, DNase-, RNase- and DNA-free, 480 Tubes (24 packs x 20 Tubes)
0030 122.186	0030122186	sterile, pyrogen-, DNase-, RNase- und DNA-free, colorless, 300 Tubes (12 Racks x 25 Tubes)
0030 122.607	0030122607	Amber (light protection), sterile, pyrogen-, DNase-, RNase- and DNA-free, 240 Tubes (12 packs x 20 Tubes)
0030 122.615	0030122615	DNA LoBind, PCR clean, 240 Tubes (12 packs x 20 Tubes)
0030 122.623	0030122623	Protein LoBind, PCR clean, 240 Tubes (12 packs x 20 Tubes)
0030 122.267	0030122267	Forensic DNA Grade, colorless, 48 Tubes, individually packaged
0030 122.640	0030122640	BioBased sterile, pyrogen-, DNase-, RNase- and DNA-free, 480 Tubes (24 packs x 20 Tubes)

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