eppendorf

Pipette tips
epT.I.P.S.®

Instructions for Use

Table of contents

1 About this manual

1.1 Notes on this manual

This document supplements the operating manual for the corresponding pipette.

1. Before using the product, read this document and the operating manual for the corresponding pipette completely.

2. Make sure that this document and the operating manual are available during the use of the product.

The dates in this manual correspond to the international date format as specified in the ISO 8601 standard. All dates are shown in the format YYYY-MM-DD or YYYY-MM.

1.2 Other applicable documents

The following documents supplement this manual:
- Instructions for use for the epT.I.P.S. Box 2.0 reusable box
- Manuals for the corresponding pipettes

Certificates

There are different certificate categories for Eppendorf SE consumables. Further information on the certificates can be found on our website www.eppendorf.com/certificates.

Batch-specific certificates are provided for the following purity grades:
- Biopur
- Forensic DNA Grade
- PCR clean
- PCR clean and Sterile
- Sterile

General certificates of conformity:
- Certificate of conformity for products with the purity grade Biopur
  (Certificate of Quality/ Conformity – Biopur)
- Certificate of conformity for products with the purity grade Forensic DNA Grade
  (Certificate of Purity – Eppendorf Forensic DNA Grade according to ISO 18385)
- Certificate of conformity for products with the purity grade PCR clean
  (Certificate of Purity – PCR clean)
- Certificate of conformity regarding trace metal
  (Certificate of Quality – epT.I.P.S. – Typical values for trace metal)
- Certificate of conformity regarding surface active additives
  (Certificate of Quality epT.I.P.S. and ep Dualfilter T.I.P.S. Quality Assurance)

- Certificate of conformity regarding the material composition and compliance with the error of measurement of pipette tips
  (Certificate of Quality/Conformity – ep Dualfilter T.I.P.S., LoRetention, SealMax)
- Certificate of conformity regarding the plastic granulates used
  (Certificate of Quality/ Conformity – Laboratory Consumables)
- Certificate of conformity regarding the filters used
  (Certificate of Quality/Conformity – ep Dualfilter T.I.P.S. – EPA/HEPA)

2 Safety

2.1 Intended use

Product group epT.I.P.S. pipette tips with the corresponding product numbers are products for general laboratory use and designed and constructed for low-contamination transfer of liquids. The pipette tips are intended for single use only and for use by qualified personnel.

2.2 Personal protective equipment

Personal protective equipment serves to ensure the safety and protection of the user when working with the product.

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

2.3.2 Material damage

2.3.2.1 Incorrect handling

If you use pipette tips more than once, carry-over, contamination and incorrect dispensing results can occur.
  • Only use pipette tips once.

If the pipette tips or the packing are not in perfect condition or are damaged, the pipette and the liquid sample can become contaminated.
  • Only use pipette tips that are in perfect condition.
  • If the packing is damaged, do not use the pipette tips.

If the filter is missing or incorrectly inserted in pipette tips, the pipette and liquid sample can become contaminated.
  • Only use pipette tips with a correctly inserted filter.
  • Do not aspirate liquid sample into the filter.

3 Product description

3.1 Features

The epT.I.P.S. have the following features:
- Single-use pipette tips
- Packaging format as Bulkware, Reloads, sterile Reloads, Racks or Singles
- Have a universal cone
- Easy to use
- Available in different purity grades
- Different volume sizes with color coding
- Color coding corresponds to color coding of pipettes
- Volume marking available for visual inspection
- Little effort required for attachment or ejection
- Seal completely
- Provide maximum precision and accuracy
- Long pipette tips available for some volume sizes
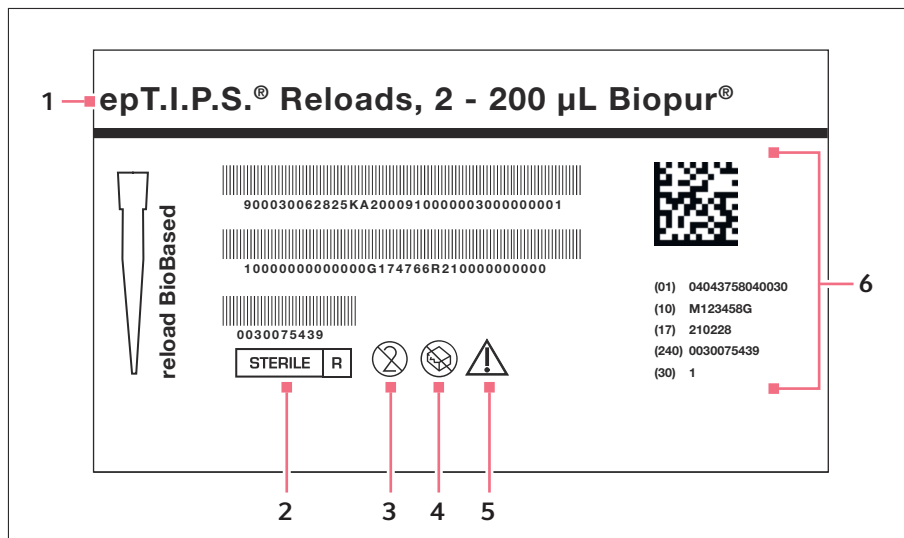
3.2 Product overview

Fig. 3-1:   epTIPS packing label part 1

1   Product name, packaging format, nominal volume and purity grade

2   Radiation-sterilized

3   Do not reuse

4   Do not use if packing is damaged

5   Read the instructions for use

6   QR code including description
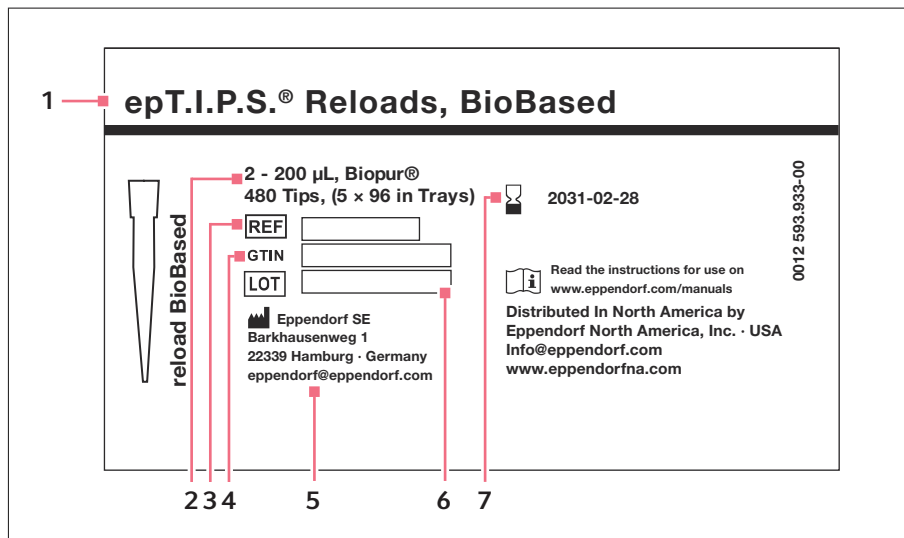
Fig. 3-2:   epTIPS packing label part 2

1 Product name	5 Manufacturer address
2 Nominal volume, purity grade, number of pipette tips	6 LOT: production lot number
3 REF: article number	7 Minimum shelf life date
4 GTIN: Global Trade Item Number	

Volume range and color coding

The pipette tips are single-use pipette tips for aspirating and dispensing liquids with air-cushion pipettes. The packing of the pipette tips is color-coded and corresponds to the color of the control button on the corresponding Eppendorf pipette.

Volume range	Color name	Color coding
0.1 µL – 10 µL	dark gray	▪
0.1 µL – 20 µL	medium gray	▪
0.5 µL – 20 µL	light gray	▪
2 µL – 200 µL	yellow	▪
20 µL – 300 µL	orange	▪

Volume range	Color name	Color coding
50 µL – 1000 µL	blue	■
50 µL – 1250 µL	green	■
50 µL L – 1250 µL L	dark green	■
0.1 mL – 2.5 mL	red	■
0.1 mL – 5 mL	violet	■
0.1 mL L – 5 mL L	violet	■
0.5 mL – 10 mL	turquoise	■
0.5 mL L – 10 mL L	turquoise	■

4 Functional description

Bulkware

Bulkware is loose pipette tips packed in reclosable bags.

Reusable box

The reusable box is a box that can be filled with both Reloads and sterile Reloads. Note that the sterile Reloads only fit into the epT.I.P.S. Box 2.0.

Racks

Racks are single-use containers that contain Trays filled with pipette tips.

Reloads

Reloads are Trays filled with pipette tips for filling a reusable box. They produce less waste compared to single-use-Racks. The refill-Trays including the pipette tips can be autoclaved in the box at up to 121 °C. Depending on the volume of the pipette tips, the Trays in the refill system are packed against each other or stacked on top of each other. The refill-Trays including the pipette tips must be inserted into the reusable box before the pipette tips can be picked up.

Sterile Reloads

Sterile Reloads are single-use containers with Trays filled with pipette tips for filling the reusable box. The sterile Reloads are only compatible with the epT.I.P.S. Box 2.0. The sterile Reloads (including the lower part and lid) must be placed together in the reusable box before pipette tips can be removed.

Singles

Singles are individual pipette tips in blister packs.

Trays

Trays are carriers with 24, 48, 96 or 384 recesses in which the pipette tips are located for picking up by a pipette. Empty Trays can be refilled. The Trays are color-coded for easy identification of pipette tips- and pipettes.

5 Operation

5.1 Attaching the pipette tip

The control button on the pipette and the Trays are color-coded. The color indicates the corresponding pipette and the volume of the pipette tips (epT.I.P.S.).

Depending on the pipetting volume, the use of extra-long pipette tips can have an adverse effect on the accuracy and correctness of dispensing compared to regular-length pipette tips.

The adjustment must be adjusted for the following pipette tips:
- epT.I.P.S. 50 - 1250 µL L, dark green, 103 mm
- epT.I.P.S. 0.2 - 5 mL L, violet, 175 mm
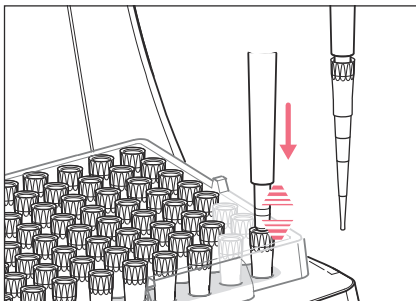- epT.I.P.S. 0.5 - 10 mL L, turquoise, 243 mm

Attaching pipette tips to single-channel pipettes

With spring-loaded tip cones, the tip cone must be pressed into the pipette tip until the edge of the pipette tip touches the ejector of the pipette. This is the only way to ensure that the pipette tip sits firmly and tightly on the tip cone.

Prerequisites:
- A single-channel pipette suitable for the pipette tip is available.

1. Open the lid by pressing the release button.

2. Insert the tip cone of the pipette by lowering it vertically into the pipette tip using firm pressure.

   The connection between tip cone and pipette tip must be sufficiently strong to ensure the dispensing results are not affected.

3. After removing the pipette tip, close the box to protect the other pipette tips.

Attaching pipette tips to multi-channel pipettes

ℹ With spring-loaded tip cones, the tip cone must be pressed into the pipette tip until the edge of the pipette tip touches the ejector of the pipette. This is the only way to ensure that the pipette tip sits firmly and tightly on the tip cone.

Prerequisites:
- A multi-channel pipette suitable for the pipette tips is available.
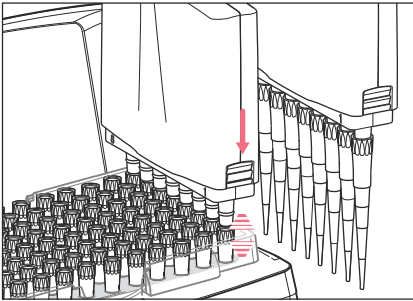
1. Open the lid by pressing the release button.

2. Insert the tip cones of the pipette by lowering them vertically, without any sideways movement, into the pipette tips using firm pressure.

   The connection between tip cone and pipette tip must be sufficiently strong to ensure the dispensing results are not affected.

3. After removing the pipette tips, close the box to protect the other pipette tips.

6 Sterilization

6.1 Autoclaving consumables

Eppendorf recommends autoclaving to sterilize the pipette tips.

┃ **!** ┃ **NOTICE! Damage to accessories**
Autoclaving pipette tips, racks and reloads in their packing can damage and deform them.
– Remove the packaging foil before autoclaving.

i Do not use any additional disinfectants before autoclaving the products.

Product	Temperature [°C]	Positive pressure [bar]	Time [min]	Number of possible cycles
epT.I.P.S.	121	1	20	1
epT.I.P.S. LoRetention	121	1	20	1
epT.I.P.S. Reloads (autoclave in box only)	121	1	20	1
epT.I.P.S. Rack (without pipette tips)	121	1	20	10
epT.I.P.S. Tray	121	1	20	10
epT.I.P.S. sterile Reloads	not autoclavable			
ep Dualfilter T.I.P.S.				
ep Dualfilter T.I.P.S. LoRetention				
ep Dualfilter T.I.P.S. Reloads				
ep Dualfilter T.I.P.S. LoRetention Reloads				

7 Disposal

7.1 Disposing of consumables

ℹ️ Information on the legal regulations that apply in your country can be obtained from your responsible local authority and your Eppendorf partner.

1. Check the legal regulations for disposal in your country.

2. Dispose of the consumables according to their labeling.

8   Technical data

8.1   Ambient conditions

Transport

	Air temperature	Relative humidity	Atmospheric pressure
In transport packing	-25 °C – 55 °C	10 % – 95 %	70 kPa – 106 kPa

Storage

Store the pipette tips in a dry place and protect them from sunlight- and UV-light.

8.2   Materials

Aggressive substances may damage components, consumables and accessories.
- Check chemical resistance before using organic solvents and aggressive chemicals.
- Check compatibility with the materials used.
- Only use liquids whose vapors do not attack the materials used.

Component	Material
epT.I.P.S.	• Polypropylene (PP)
ep Dualfilter T.I.P.S. filter	• Polyethylene (PE)
Tray	• Polypropylene (PP)
Reload, lid	• Polypropylene (PP)
Reload, lower part	• Polypropylene (PP)
Rack	• Polypropylene (PP)

8.3   Minimum shelf life

The minimum shelf life date can be found on the packing. The minimum shelf life refers to the production date.

Consumables	Purity grade	Minimum shelf life
epT.I.P.S. Standard	Eppendorf Quality	at least 8 years
ep Dualfilter T.I.P.S.	Sterile	at least 5 years
	PCR clean	
	PCR clean + Sterile	
	Biopur	
	Forensic DNA Grade	

8.4 Purity grades

epT.I.P.S.

The pipette tips are available in the following purity grades and purity criteria.

Purity criterion	Eppendorf Quality	Sterile	PCR clean	PCR clean + Sterile	Biopur	Forensic DNA Grade
epT.I.P.S. Set	■					
epT.I.P.S. Reloads	■		■			
epT.I.P.S. sterile Reloads					■	
epT.I.P.S. Racks	■	■	■		■	
epT.I.P.S. Singles					■	
epT.I.P.S. Bulk	■					
epT.I.P.S. LoRetention	■		■	■		

ep Dualfilter T.I.P.S.

The pipette tips are available in the following purity grades and purity criteria.

Purity criterion	Eppendorf Quality	Sterile	PCR clean	PCR clean + Sterile	Biopur	Forensic DNA Grade
ep Dualfilter T.I.P.S.				■		■
ep Dualfilter T.I.P.S. Reloads				■		
ep Dualfilter T.I.P.S. LoRetention				■		
ep Dualfilter T.I.P.S. LoRetention Reloads				■	■	

Certified batch testing is carried out for the following purity grades and purity criteria.

Purity criterion	Eppendorf Quality	Sterile	PCR clean	PCR clean + Sterile	Biopur	Forensic DNA Grade
Human DNA-free	–		■	■	■	■
DNA-free (human bacteria DNA-free)	–				■	
DNase-free	–		■	■	■	■
RNase-free	–		■	■	■	■
PCR-inhibitors free	–		■	■	■	■
ATP-free	–				■	
Pyrogen-free (endo-toxin-free)	–	■		■	■	
Sterile (Ph.Eur./USP)	–	■		■	■	

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