



## Pipette tips epT.I.P.S.®

**Instructions for Use**

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## **1 About this manual**

### **1.1 About 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.

### **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 categories of certificates for Eppendorf SE consumables. More information on certificates can be found on our website [www.eppendorf.com/certificates](http://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 adherence to the error of measurement of pipette tips (Certificate of Quality/Conformity – epT.I.P.S. Dualfilter, 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**

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

The personal protective equipment must comply with the country-specific regulations, as well as the regulations of the laboratory.

### **2.3 Residual risks when used as intended**

To reduce the risk of personal injury and material damage and to avoid dangerous situations, observe the general safety instructions.

#### **2.3.1 Personal injury**

##### **2.3.1.1 Biological hazards**

Improper pipetting of infectious liquids and pathogenic germs can damage your health.

- Observe the national regulations and the biosafety level of your laboratory.
- Wear personal protective equipment.
- Observe the Safety Data Sheets and instructions for use for the accessories.
- Read the "Laboratory Biosafety Manual" (source: World Health Organization, Laboratory Biosafety Manual, in its current version) about handling germs or biological material of risk group II or higher.

##### **2.3.1.2 Chemical hazards**

Improper pipetting of radioactive, toxic and aggressive liquids can cause serious damage to health.

- Observe the national regulations of your laboratory.
- Wear personal protective equipment.
- Observe the Safety Data Sheets for the accessories.

## 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 pipette tips or packing are not in perfect condition and undamaged, the pipette and 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
- Packing unit as Bulkware, Reloads, sterile Reloads, Racks or Singles
- Have a universal cone
- Easy handling
- 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
- Minimal force required for attachment or ejection
- Seal completely
- Provide maximum precision and accuracy
- Long pipette tips available for some volume sizes



## 3.2 Product overview

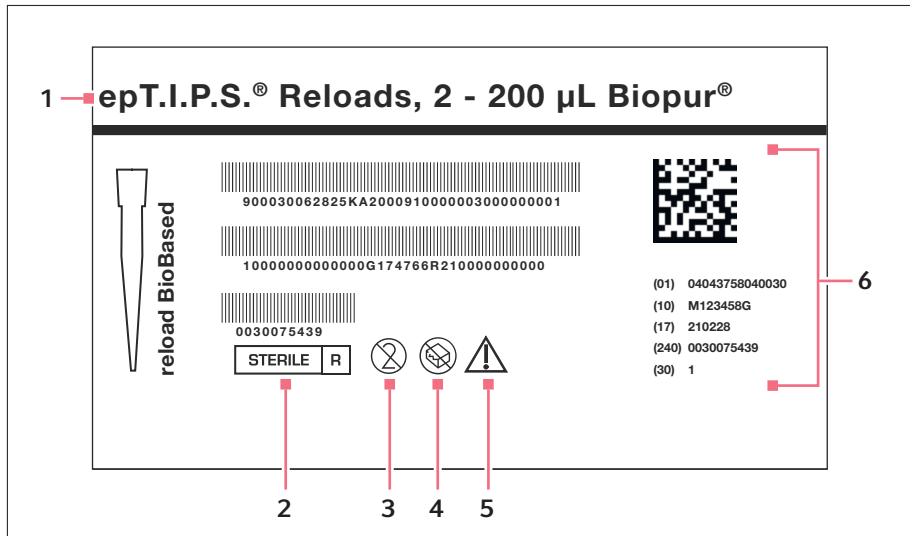


Fig. 3-1: epTIPS packing label part 1

- |   |   |   |                                  |
|---|---|---|----------------------------------|
| 1 | Product name, packing unit, nominal volume and purity grade | 4 | Do not use if packing is damaged |
| 2 | Radiation-sterilized  | 5 | Read the instructions for use    |
| 3 | Do not reuse  | 6 | QR code including description    |

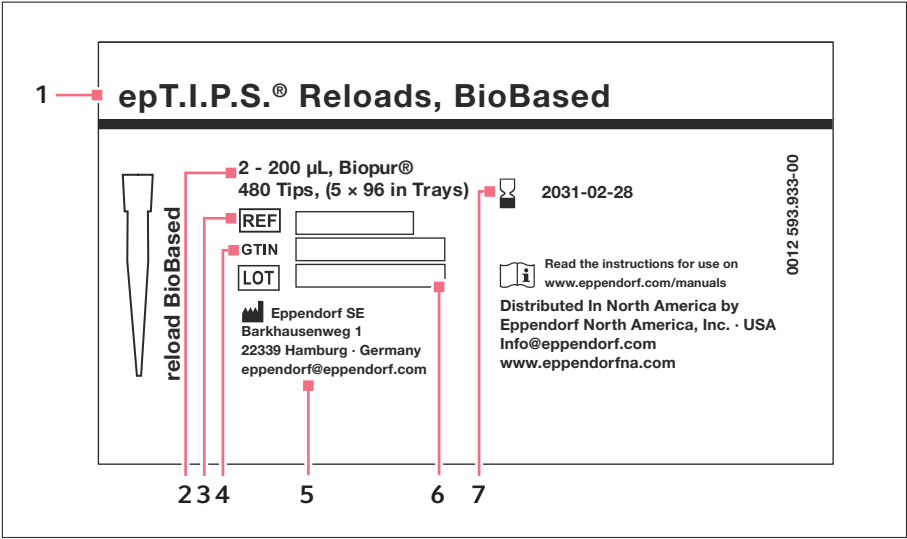


Fig. 3-2: epTIPS packing label part 2

- 1

Product name
- 2

Nominal volume and purity grade
- 3

REF: article number
- 4

GTIN: Global Trade Item Number
- 5







Manufacturer address
- 6

LOT: production lot number
- 7

Use by

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 matching Eppendorf pipette.

Pipette tip volume	Color name	Color code
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	
50 µL – 1000 µL	blue	
50 µL – 1250 µL	green	

Pipette tip volume	Color name	Color code
50 µL L – 1250 µL L	dark green	
0.25 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	

**Functional description**

epT.I.P.S.®  
English (EN)

**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 inserted into the reusable box before the 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 tip (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:

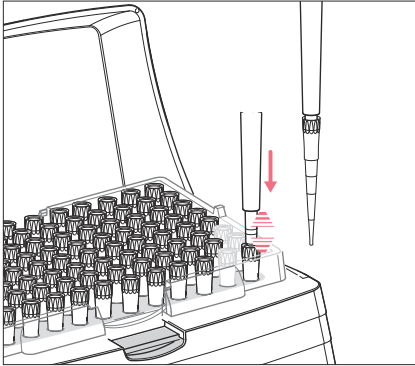
- epT.I.P.S. 50 - 1250 µL L, dark green, 103 mm
- epT.I.P.S. 0.2 - 5 mL L, violet, 175 mm
- epT.I.P.S. 0.5 - 10 mL L, turquoise, 243 mm

Read the operating manual for your pipette in order to adjust the pipette when using extra-long pipette tips.

## Attaching pipette tips to single-channel pipettes

### Prerequisites

- A single-channel pipette suitable for the pipette tip is available



1. Open the lid by pressing the release button.
2. Take your pipette and insert the pipette tip cone vertically into the pipette tip, applying slight pressure. There must be a sufficiently strong connection between the pipette and the pipette tip.



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 on the pipette. This is the only way to ensure that the pipette tip sits firmly and tightly on the tip cone.



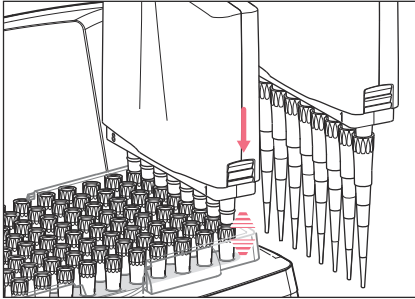
The tip cone must be inserted vertically into the pipette tip, otherwise the dispensing results may be impaired.

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

## Attaching pipette tips to multi-channel pipettes

### Prerequisites

- A multi-channel pipette suitable for the pipette tips is available



1. Open the lid by pressing the release button.
2. Take your pipette and insert the pipette tip cones vertically into the pipette tips, applying slight pressure. There must be a sufficiently strong connection between the pipette and the pipette tips.

**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 on the pipette. This is the only way to ensure that the pipette tip sits firmly and tightly on the tip cone.

**i** The tip cones must be inserted into the pipette tips once, vertically and without sideways movement, otherwise the dispensing results may be impaired.

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.



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**



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.

**Technical data**epT.I.P.S.®  
English (EN)**8 Technical data****8.1 Ambient conditions****Transport**

	<b>Air temperature</b>	<b>Relative humidity</b>	<b>Atmospheric pressure</b>
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****NOTICE! Damage to accessories**

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.

<b>Component</b>	<b>Material</b>
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**

<b>Consumables</b>	<b>Purity grade</b>	<b>Minimum shelf life</b>
epT.I.P.S. Standard	Eppendorf Quality	at least 8 years
ep Dualfilter T.I.P.S.	Sterile	at least 5 years







Consumables	Purity grade	Minimum shelf life
	PCR clean	
	PCR clean + Sterile	
	Biopur	
	Forensic DNA Grade	

The minimum shelf life can be found on the packing.

8.4 Purity grade








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				■	■	

Batch testing (certified) 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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