

Register your instrument!  
[www.eppendorf.com/myeppendorf](http://www.eppendorf.com/myeppendorf)



# Easypet<sup>®</sup> 3

Operating manual

Copyright© 2017 Eppendorf AG, Germany. All rights reserved, including graphics and images. No part of this publication may be reproduced without the prior permission of the copyright owner.

Eppendorf® and the Eppendorf Brand Design are registered trademarks of Eppendorf AG, Germany.

Easypet® is a registered trademark of Eppendorf AG, Germany.

Registered trademarks and protected trademarks are not marked in all cases with ® or ™ in this manual.

U.S. Patents are listed on [www.eppendorf.com/ip](http://www.eppendorf.com/ip)

**Table of contents**

<b>1</b>	<b>Operating instructions</b> . . . . .	<b>5</b>
1.1	Using this manual . . . . .	5
1.2	Danger symbols and danger levels . . . . .	5
1.2.1	Danger symbols . . . . .	5
1.2.2	Danger levels . . . . .	5
1.3	Symbols used . . . . .	5
<b>2</b>	<b>Safety</b> . . . . .	<b>6</b>
2.1	Intended use . . . . .	6
2.2	Warnings for intended use . . . . .	6
2.3	Information on product liability . . . . .	7
<b>3</b>	<b>Product description</b> . . . . .	<b>8</b>
3.1	Delivery package . . . . .	8
3.2	Features . . . . .	8
3.3	Product overview . . . . .	9
3.4	Mains/power supply device and power plug adapter . . . . .	10
3.5	Rechargeable battery . . . . .	10
3.6	RFID chip . . . . .	11
3.6.1	RFID position . . . . .	11
3.7	Pipette types . . . . .	12
3.8	Materials . . . . .	14
3.9	Warranty . . . . .	14
<b>4</b>	<b>Installation</b> . . . . .	<b>15</b>
4.1	Preparing installation . . . . .	15
4.2	Mains/power supply device assembly . . . . .	15
4.2.1	Identifying the mains/power supply device . . . . .	15
4.2.2	Inserting the power plug adapter . . . . .	15
4.2.3	Replace the power plug adapter . . . . .	15
4.3	Removing the discharge protector . . . . .	16
4.4	Rechargeable battery status display during operation . . . . .	16
4.4.1	The device is ready for operation . . . . .	16
4.4.2	Charging the rechargeable battery . . . . .	17
4.4.3	Rechargeable battery charging . . . . .	17
4.4.4	The rechargeable battery is charged . . . . .	17
<b>5</b>	<b>Operation</b> . . . . .	<b>18</b>
5.1	Charging the rechargeable battery . . . . .	18
5.2	Preserving the battery capacity . . . . .	19
5.2.1	Longer periods without operation . . . . .	19
5.3	Inserting the pipette . . . . .	19
5.4	Speed control . . . . .	20
5.5	Aspirating liquid . . . . .	21

## 4 Table of contents

EasyPet® 3  
English (EN)

5.6	Dispensing liquid	22
5.6.1	Flow-out	22
5.6.2	Blow out	23
5.7	Using the wall mount	24
5.7.1	Mounting the wall mount	24
5.7.2	Removing the wall mount	24
5.8	Using the shelf stand	25
<b>6</b>	<b>Maintenance</b>	<b>26</b>
6.1	Disassembling the pipette clamp	26
6.2	Cleaning	26
6.2.1	Cleaning the pipetting aid	26
6.2.2	Cleaning the pipette clamp	27
6.3	Replacing the rechargeable battery	28
6.4	Mounting the pipette clamp	28
6.5	Checking the leak tightness	28
<b>7</b>	<b>Troubleshooting</b>	<b>29</b>
7.1	General errors	29
7.1.1	Rechargeable battery	29
7.1.2	Liquid	29
<b>8</b>	<b>Technical data</b>	<b>30</b>
8.1	Weight/dimensions	30
8.2	Mains/power supply device	30
8.3	Rechargeable battery	30
8.4	Ambient conditions	30
<b>9</b>	<b>Transport, storage and disposal</b>	<b>31</b>
9.1	Decontamination before shipment	31
9.2	Transport	31
9.3	Storage	32
9.4	Disposal	33
<b>10</b>	<b>Ordering information</b>	<b>34</b>
10.1	Accessories	34
10.2	Serological pipettes	34
	<b>Certificates</b>	<b>35</b>

## 1 Operating instructions







### 1.1 Using this manual

- ▶ Read this operating manual completely before using the device for the first time. Also observe the instructions for use of the accessories.
- ▶ This operating manual is part of the product. Thus, it must always be easily accessible.
- ▶ Enclose this operating manual when transferring the device to third parties.
- ▶ You will find the current version of the operating manual for all available languages on our website under [www.eppendorf.com/manuals](http://www.eppendorf.com/manuals).

### 1.2 Danger symbols and danger levels

#### 1.2.1 Danger symbols


The safety instructions in this manual have the following danger symbols and danger levels:

	<b>Biohazard</b>		<b>Explosion</b>
	<b>Cuts</b>		<b>Toxic substances</b>
	<b>Hazard point</b>		<b>Material damage</b>

#### 1.2.2 Danger levels

<b>DANGER</b>	<i>Will</i> lead to severe injuries or death.
<b>WARNING</b>	<i>May</i> lead to severe injuries or death.
<b>CAUTION</b>	May lead to light to moderate injuries.
<b>NOTICE</b>	May lead to material damage.

### 1.3 Symbols used

Depiction	Meaning
1.	Actions in the specified order
2.	
▶	Actions without a specified order
•	List
<i>Text</i>	Display text or software text
	Additional information

## 2 **Safety**

### 2.1 **Intended use**

The pipetting aid is intended for dispensing liquids. In-vivo applications (in or on the human body) are not allowed.

The pipetting aid may only be operated by skilled personnel who have received the appropriate training. All users must have read the operating manual carefully and must have become familiar with the device's mode of operation.

### 2.2 **Warnings for intended use**

---



#### **WARNING! Damage to health due to infectious liquids and pathogenic germs.**

- ▶ When handling infectious liquids and pathogenic germs, observe the national regulations, the biological security level of your laboratory, the safety data sheets, and the manufacturer's application notes.
- ▶ Wear your personal protective equipment.
- ▶ Consult the "Laboratory Biosafety Manual" (source: World Health Organization, Laboratory Biosafety Manual, in its respectively current valid version).



#### **WARNING! Risk of explosion due to explosive atmospheres and explosive substances.**

- ▶ Do not use the Easypet 3 in explosive atmospheres.
- ▶ Do not operate the Easypet 3 in rooms where explosive substances are handled.
- ▶ Do not use the Easypet 3 to dispense explosive, readily flammable (flash point < 21°C), highly flammable (flash point < 0°C) or highly reactive substances.
- ▶ Do not use the Easypet 3 for dispensing substances which could generate an explosive atmosphere.



#### **WARNING! Damage to health due to toxic, radioactive or aggressive chemicals.**

- ▶ Wear your personal protective equipment.
- ▶ Observe the national regulations for handling these substances.
- ▶ Observe the safety data sheets and manufacturer's application notes.



**CAUTION! Poor safety due to incorrect accessories and spare parts.**

The use of accessories and spare parts other than those recommended by Eppendorf may impair the safety, functioning and precision of the device. Eppendorf cannot be held liable or accept any liability for damage resulting from the use of incorrect or non-recommended accessories and spare parts, or from the improper use of such equipment.

- ▶ Only use accessories and original spare parts recommended by Eppendorf.



**CAUTION! Danger to individuals due to careless use.**

- ▶ Only initiate liquid dispensing if it is safe to do so.
- ▶ For all dispensing tasks, make sure that you are not endangering yourself or anyone else.



**NOTICE! Damage to the device due to penetration of liquids.**

- ▶ Only immerse the serological pipette into the liquid.
- ▶ Do not put the pipette controller down when the pipette tip is filled.
- ▶ The pipette controller itself may not come into contact with the liquid.



**NOTICE! Damage to device due to missing pipette.**

- ▶ Use the Easypet 3 only if a pipette has been inserted.



If you would like to dispense readily or highly flammable liquids, we recommend the use of a positive displacement system made up of manual Multipettes/Repeaters and Combitips. Check the chemical resistance and observe the safety notes before using the Multipette/Repeater.

## 2.3 Information on product liability

In the following cases, the designated protection of the device may be compromised. Liability for any resulting property damage or personal injury is then transferred to the operator:

- The device is not used in accordance with the operating manual.
- The device is used outside of its intended use.
- The device is used with accessories or consumables which are not recommended by Eppendorf.
- The device is maintained or repaired by people not authorized by Eppendorf.
- The user makes unauthorized changes to the device.

**3** **Product description**  
**3.1** **Delivery package**

Quantity	Description
1	Easypet 3
1	Lithium polymer battery
2	Non-sterile membrane filter, 0.45 µm
1	Wall mount
1	Shelf stand
1	Universal power supply
1	Operating manual
1	Short instructions

**3.2** **Features**

The Easypet 3 is a battery-driven pipette controller. You can use glass or plastic pipettes in a volume range of 0.1 mL to 100 mL.

A pump generates underpressure or overpressure to aspirate or dispense the liquid. The liquid can also be dispensed solely via the atmospheric pressure.

The aspirating and dispensing speed is controlled by how far the control buttons are pressed in.



### 3.3 Product overview

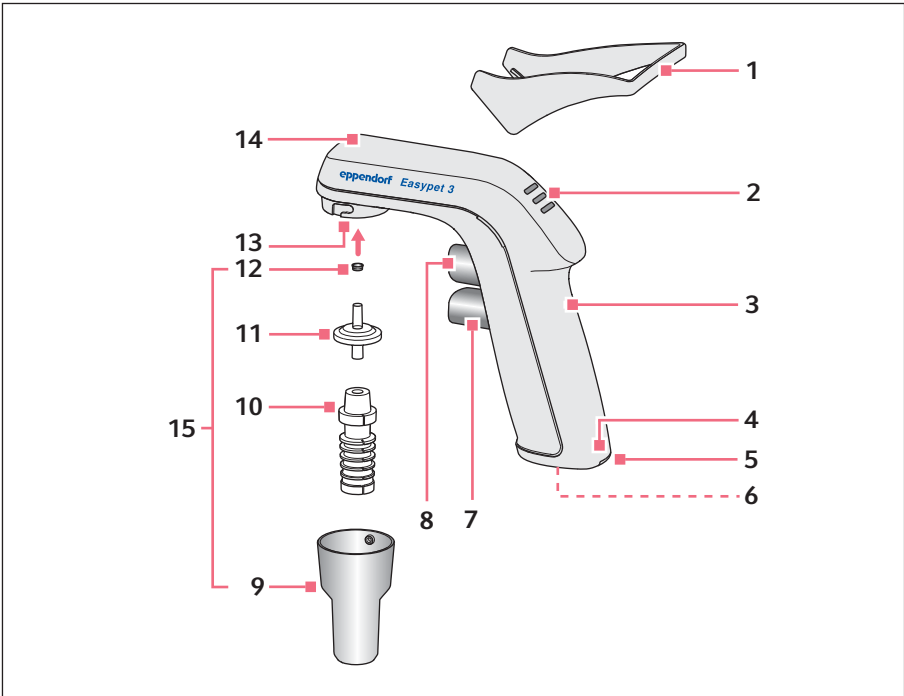


Fig. 3-1: EasyPet 3 with accessories

- |  |                                  |
|--|----------------------------------|
| 1 Shelf stand                          | 9 Aspirating cone                |
| 2 Battery status display               | 10 Pipette adapter               |
| 3 RFID chip                            | 11 Membrane filter               |
| 4 Serial number                        | 12 Seal for filter adapter       |
| 5 Rechargeable battery compartment lid | 13 Filter adapter                |
| 6 Connector socket                     | 14 Pressure compensation opening |
| 7 Dispensing button                    | 15 Pipette clamp                 |
| 8 Aspiration button                    |                                  |

**Product description**

Easypet® 3  
English (EN)

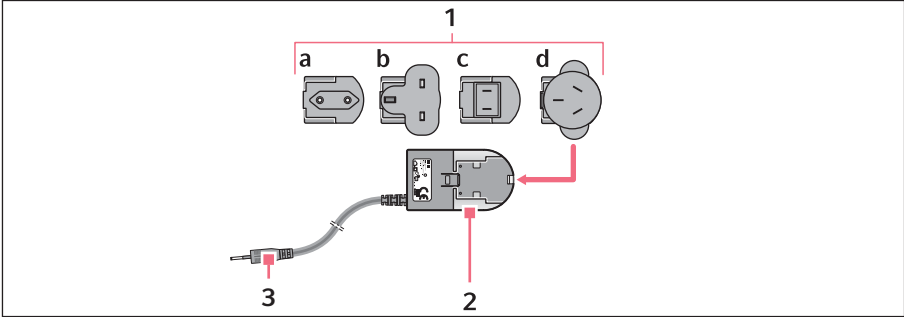
**3.4 Mains/power supply device and power plug adapter**

Fig. 3-2: Mains/power supply device with adapters

**1 Power plug adapters**

- a Europe
- b Great Britain
- c USA
- d Australia

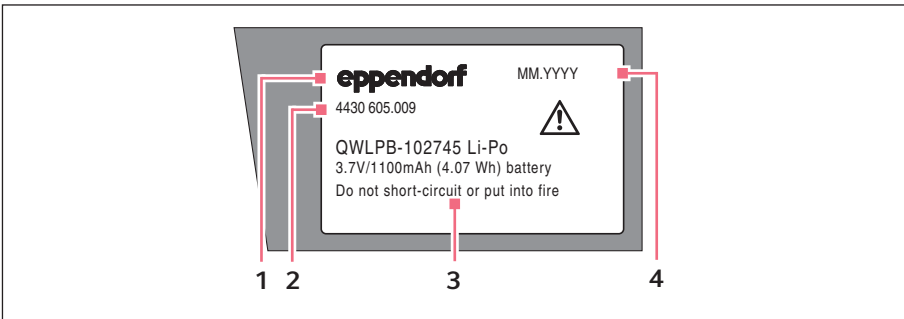
**3 Charging plug****2 Mains/power supply device****3.5 Rechargeable battery**

Fig. 3-3: Original rechargeable battery from Eppendorf – front

**1 Eppendorf logo****2 Order no.****3 Technical specifications****4 Production date**

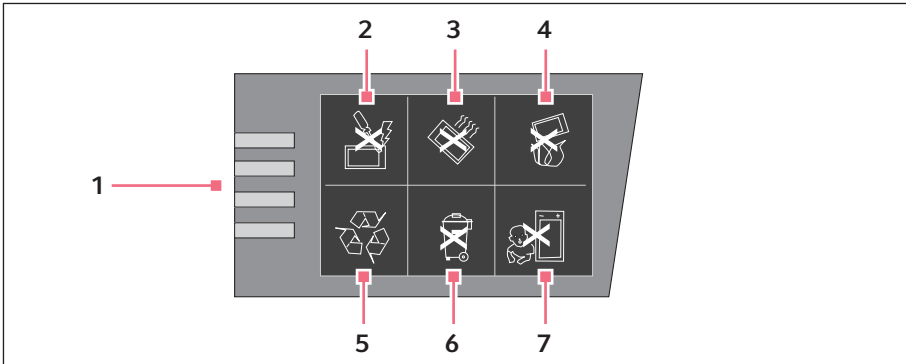


Fig. 3-4: Rear side

- |                                     |  |
|-------------------------------------|--|
| 1 Contacts                          | 5 Recycle the rechargeable battery               |
| 2 Do not short circuit the contacts | 6 Do not dispose of together with domestic waste |
| 3 Do not heat above 60 °C           | 7 Not suitable for small children                |
| 4 Do not expose to fire             |  |

### 3.6 RFID chip

The Eppendorf dispensing device is equipped with a RFID chip. The RFID chip can be read and written with the TrackIT reader and TrackIT software. The scanned device data is saved in a database and can be opened at any time. The device data can be exported individually or automatically in various formats.

#### 3.6.1 RFID position

The position of the chip on dispensing devices is marked with the lettering **RFID**.

**Product description**

Easypet® 3  
English (EN)

**3.7 Pipette types**

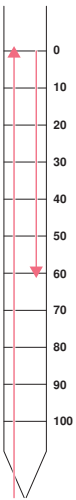
Measuring pipettes and volumetric pipettes are divided into 3 classes: A, AS and B. Class A and AS pipettes are more precise than Class B pipettes. They vary according to the elapse time. The elapse time depends on the nominal volume and the design of the pipette. Class AS pipettes are quick-drain pipettes.

Volumetric pipettes have 1 or 2 marks and are adjusted to flow-out. Measuring pipettes have a scale and are divided into 4 types.

---

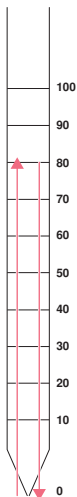
**Type 1 measuring pipette**

---



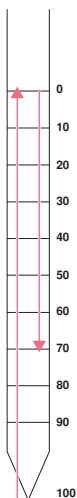
- Adjusted to flow-out.
  - Nominal volume is indicated by the lowest scale graduation.
  - Aspiration up to the zero line at the upper end of the pipette.
  - Dispensing to any scale graduation on the scale.
-

### Type 2 measuring pipette



- Adjusted to flow-out.
- Nominal volume is indicated by the top scale graduation.
- Aspiration to any scale graduation on the scale.
- Dispensing until the pipette is completely empty.

### Type 3 and type 4 measuring pipette



#### Measuring pipette

- Adjusted to flow-out.
- Nominal volume is indicated by the tip of the pipette.
- Aspiration up to the zero line at the upper end of the pipette.
- Dispensing to any scale graduation on the scale or until the pipette is completely empty.

#### Type 4 measuring pipette

- Adjusted to blow-out.
- Nominal volume is indicated by the tip of the pipette.
- Aspiration up to the zero line at the upper end of the pipette.
- Dispensing to any scale graduation on the scale or until the pipette is completely empty.
- Dispensing the last drops using blow-out.
- Blow-out pipettes are only available in accuracy class B.

**Product description**

Easypet® 3  
English (EN)

**3.8 Materials**

**NOTICE! Aggressive substances may damage components, consumables and accessories.**

- ▶ Check the chemical resistance before using organic solvents or aggressive chemicals.
- ▶ Only use liquids whose vapors do not attack the materials used.
- ▶ Follow the cleaning instructions.

The pipetting aid assemblies are composed of the following materials:

<b>Component</b>	<b>Material</b>
Housing, aspirating cone, aspiration button, dispensing button, membrane filter housing, wall holder, shelf stands	Polypropylene (PP)
Filter adapter	Polybutylene terephthalate (PBT)
Pipette adapter	Silicone
Filter membrane	Polytetrafluoroethylene (PTFE)
Seal for filter adapter	Hydrated acrylonitrile butadiene rubber (HNBR)
Tubes and valves	Polymer fluorine rubber (FKM), polybutylene terephthalate (PBT), polyphenylene sulfide (PPS), silicone
Battery status display	Cyclic olefin copolymer (COC)

**3.9 Warranty**

For warranty claims, please contact your local Eppendorf sales partner. If the housing of the pipetting aid is opened by unauthorized individuals, or the device is misused, no warranty claim may be made. The rechargeable battery and all other wear parts are excluded from the warranty.

## 4 Installation

### 4.1 Preparing installation

- ▶ Use the delivery package details to check that the delivery is complete.
- ▶ Check all parts for any transport damage.
- ▶ Keep the transport carton and the packing material for subsequent safe transport or storage.

### 4.2 Mains/power supply device assembly



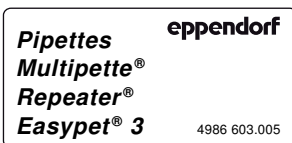
**WARNING! Incorrect or damaged mains/power supply devices can cause severe personal injury or damage to the device.**

Incorrect or damaged mains/power supply devices may cause electric shocks, cause the device to overheat, catch fire, melt, short circuit or similar damage.

- ▶ Only use the mains/power supply device which is included with the delivery to charge the device. You can recognize the correct mains/power supply device from the Eppendorf logo and the device name on the power mains/power supply device.
- ▶ Do not use any damaged mains/power supply devices.

#### 4.2.1 Identifying the mains/power supply device

The original mains/power supply device from Eppendorf is labeled with the compatible dosing devices, the order number and the Eppendorf logo.



#### 4.2.2 Inserting the power plug adapter

1. Select the appropriate power plug adapters for the mains/power line.
2. Push the power plug adapter on the mains/power supply device until it locks into place.

#### 4.2.3 Replace the power plug adapter.

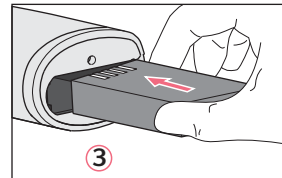
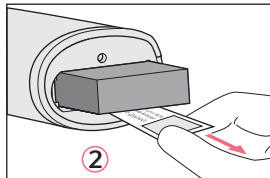
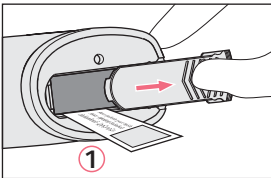
1. Press and hold down the release on the mains/power supply device.
2. Disconnect the power plug adapter.
3. Select the appropriate power plug adapters for the mains/power line.

### 4.3 Removing the discharge protector



#### **WARNING! Injury caused by incorrect handling of the rechargeable battery.**

- ▶ Only use rechargeable batteries supplied by Eppendorf.
- ▶ Never pierce, crush or throw the rechargeable battery.
- ▶ Only use the rechargeable battery in the supplied device.
- ▶ Do not touch a leaking rechargeable battery.
- ▶ Do not use a damaged rechargeable battery.
- ▶ Dispose of rechargeable batteries in accordance with the legal requirements.

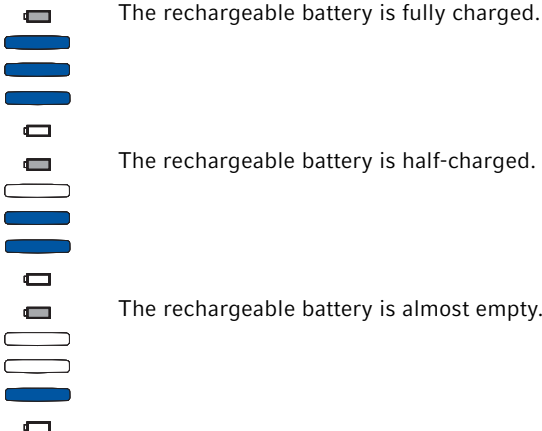


Proceed as follows:

1. Slide the battery compartment lid open.
2. Remove the rechargeable battery and then remove the discharge protection.
3. Insert the rechargeable battery.
4. Slide the rechargeable battery compartment lid shut.

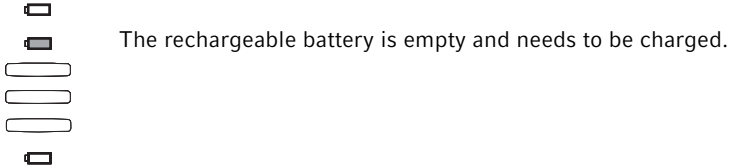
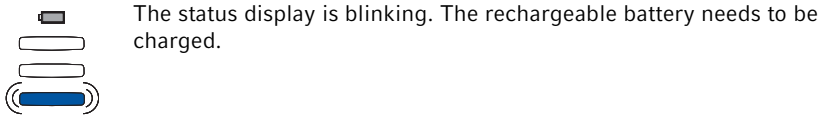
### 4.4 Rechargeable battery status display during operation

#### 4.4.1 The device is ready for operation.

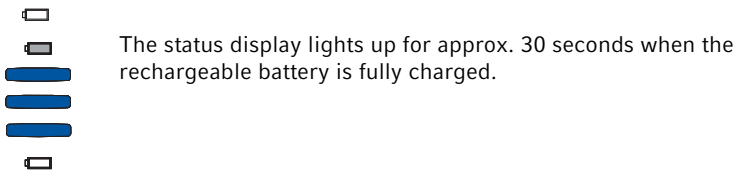
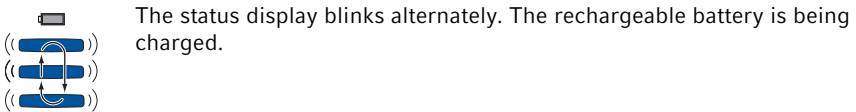




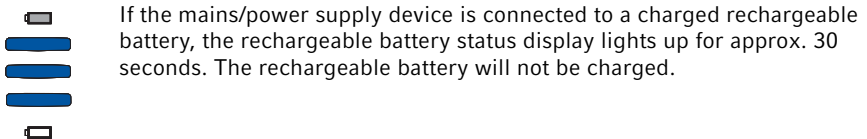
#### 4.4.2 Charging the rechargeable battery



#### 4.4.3 Rechargeable battery charging



#### 4.4.4 The rechargeable battery is charged.



## 5 Operation

### 5.1 Charging the rechargeable battery



**NOTICE! Loss of full charging capacity of the rechargeable battery if charged incorrectly.**

The charge of the supplied rechargeable battery is incomplete. The rechargeable battery will reach its full capacity only after several discharging and charging cycles.

- ▶ Do not charge the rechargeable battery in a hot environment ( $> 60\text{ }^{\circ}\text{C}$ ).
- ▶ Only use the mains/power supply device which is included with the delivery to charge the rechargeable battery.



**NOTICE! Material damage due to outdated rechargeable battery.**

If the rechargeable battery exceeds its service life, the rechargeable battery may become deformed or burst.

- ▶ Replace the rechargeable battery when the housing is deformed.
- ▶ Replace the rechargeable battery if the charging cycles are unusually short.
- ▶ Replace the rechargeable battery if it is older than 3 years.

Proceed as follows:

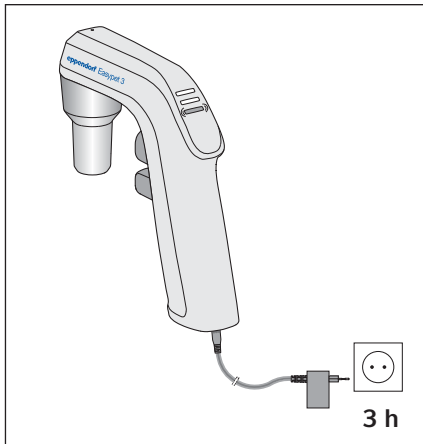


Fig. 5-1: Charging the rechargeable battery

1. Insert the mains/power supply device into the socket.
2. Insert the charging plug of the mains/power supply device into the connector socket on the grip.

- ❗ The charging time depends on the charging state of the rechargeable battery. For fully discharged rechargeable batteries, this is about 3 hours.
- ❗ You can continue using the pipetting aid during the charging process.

## 5.2 Preserving the battery capacity

The battery capacity can be preserved over the service life to a great extent.

### 5.2.1 Longer periods without operation

1. Charge the battery completely if the pipette controller is not used for a longer period of time (> 4 weeks).
2. Recharge the battery completely every 2 months.

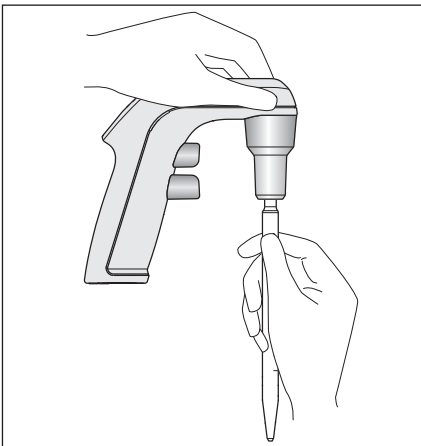
## 5.3 Inserting the pipette



### **WARNING! Risk of cuts from shattered glass pipettes.**

Glass pipettes are fragile and may cause severe cuts if they break.

- ▶ Do not use force to insert glass pipettes.
- ▶ Wear your personal protective equipment.
- ▶ Use a towel to protect the hand used for insertion.



- ▶ Pick up the pipette from above and carefully insert it in the aspirating cone until it is positioned securely and air-tight.

Fig. 5-2: Inserting the pipette

## 5.4 Speed control

The liquid aspiration speed is regulated continuously by controlling how far the control button is pressed.

### Slowly aspirating or dispensing liquid

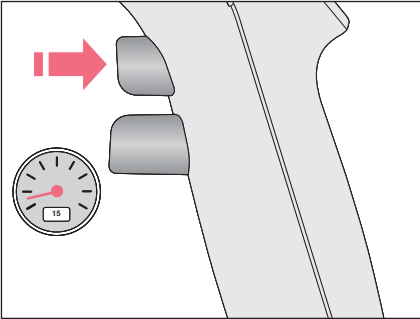


Fig. 5-3: Slow aspiration

- ▶ To slowly aspirate or dispense liquid, press the corresponding control button lightly.

### Quickly aspirating or dispensing liquid

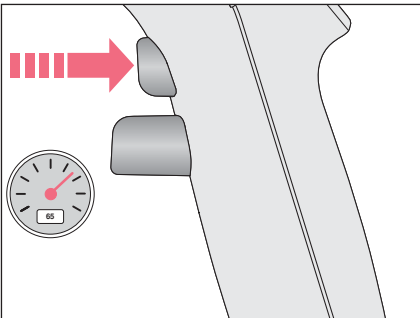


Fig. 5-4: Quick aspiration

- ▶ To quickly aspirate or dispense liquid, press the corresponding control button firmly.

## 5.5 Aspirating liquid



**NOTICE! Damage to device due to missing or damaged membrane filter.**

- ▶ Do not use the pipetting aid if the membrane filter is not inserted.
- ▶ Replace the membrane filter if it is damaged.



Observe the type of pipette used.

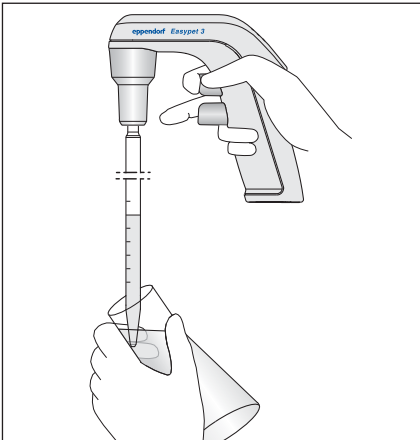


Fig. 5-5: Aspirating liquid

1. Immerse the pipette into the liquid.
2. Slowly press the aspirating button and keep it pressed down.  
The further the aspirating button is pressed, the quicker the liquid will be aspirated.
3. Wipe the pipette on the tube inner wall and remove it.

## 5.6 Dispensing liquid

- i** Observe the type of pipette used.
- i** After liquid dispensing, hold class AS quick-drain pipettes on the tube inner wall for 5 seconds to allow the liquid to drain.

### 5.6.1 Flow-out

A valve will be opened during flow-out. The liquid drains from the pipette as a result of atmospheric pressure.

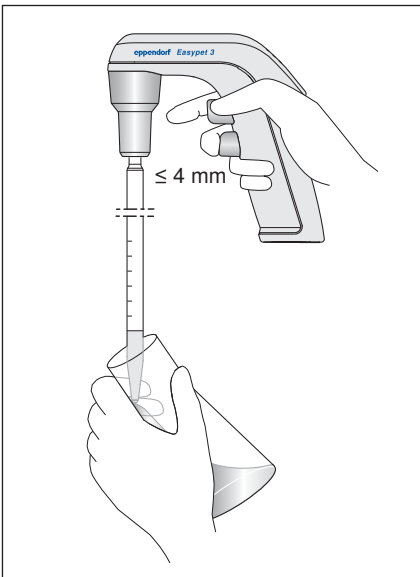


Fig. 5-6: Allowing liquid to flow-out

1. Hold the pipette horizontally and place it on the tube inner wall.
2. Press the dispensing button lightly.

### 5.6.2 Blow out

A blow out dispenses liquid using the pump.

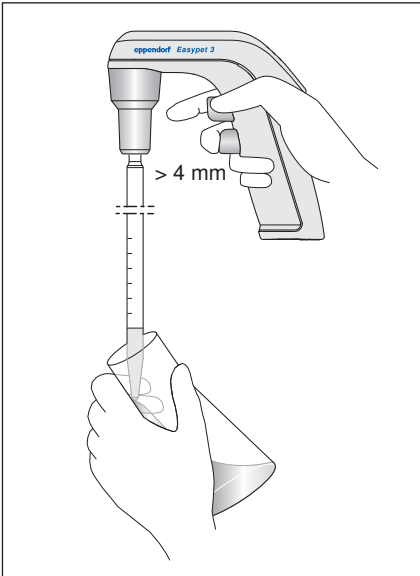


Fig. 5-7: Blowing out liquid

1. Hold the pipette horizontally and place it on the tube inner wall.
2. Press down the dispensing button hard.

## 5.7 Using the wall mount

For storage, the pipetting aid can be mounted in a wall mounting device.

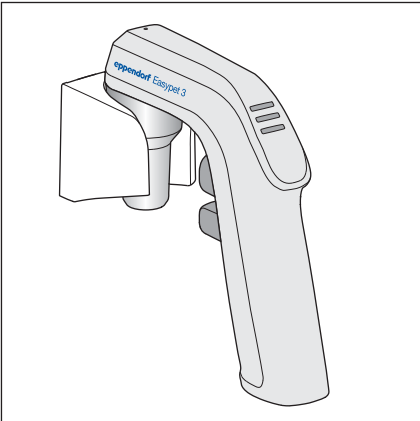


Fig. 5-8: Wall mount with Easypet 3

### 5.7.1 Mounting the wall mount

1. Clean the mounting location on the wall and allow it to dry.
2. Remove the protective foil.
3. Press the wall mount firmly against the wall.
4. Allow the adhesive tape to dry for 24 hours.
5. Only apply weight to the wall mount after the drying time has expired.

### 5.7.2 Removing the wall mount

1. Rotate the wall mount and remove it.
2. Remove the adhesive tape.



## 5.8 Using the shelf stand

The supplied shelf stand can also be used for storage.

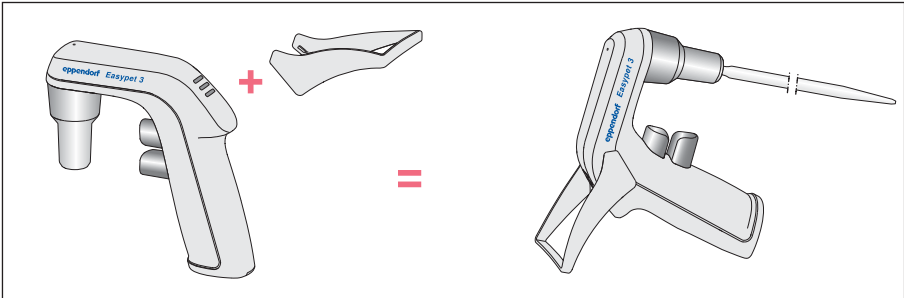


Fig. 5-9: Attaching the shelf stand

- ▶ Insert the shelf stand in the groove.
- ▶ To remove the shelf stand, press the sides of the shelf stand together.

## 6 Maintenance

### 6.1 Disassembling the pipette clamp

If liquid has entered the pipette clamp, the aspiration capacity may be decreased, or pipette clamp assemblies may be damaged. The pipette clamp must be disassembled in order to clean or replace the assemblies.

1. Turn the aspirating cone counterclockwise and remove it.
2. Remove the pipette adapter and membrane filter from the filter adapter.
3. Remove the membrane filter from the pipette adapter.
4. Use a sharp object to pry the seal out of the filter adapter.

## 6.2 Cleaning

### 6.2.1 Cleaning the pipetting aid



Special service is not required.



**NOTICE! Damage to the device due to autoclaving.**

- ▶ Do not autoclave the pipetting aid.

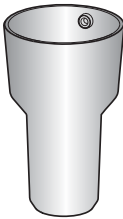
To clean contaminated surfaces, proceed as follows:

- ▶ Wipe the housing using a damp cloth.
- ▶ Disinfect surfaces using alcohol (ethanol, propanol) or alcohol-containing disinfectants.

### 6.2.2 Cleaning the pipette clamp

The pipette clamp assemblies can be replaced, cleaned or autoclaved as described below (121 °C, 1 bar overpressure for 20 min.)

#### Aspirating cone



- Can be wiped using a damp cloth
- Can be disinfected with alcohol (ethanol, propanol) or alcohol-containing disinfectants.
- Repeatedly autoclavable
- Can be replaced

#### Pipette adapter



- Can be rinsed with demineralized water
- Repeatedly autoclavable
- Can be replaced

#### Membrane filter



- To be disposed of if contaminated
- Cannot be cleaned
- Can be autoclaved once
- Can be replaced

#### Sealing



- Can be rinsed with demineralized water
- Repeatedly autoclavable
- Can be replaced



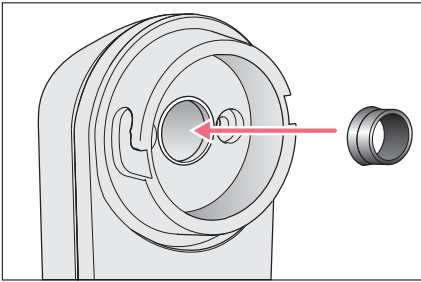
You can also use a membrane filter with a pore size of 0.2 µm.

### 6.3 Replacing the rechargeable battery

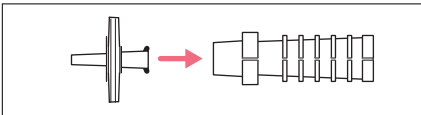
#### Prerequisites

- There is a new rechargeable battery from Eppendorf available.
1. Open the rechargeable battery compartment lid.
  2. Remove the battery.
  3. Insert a new battery.
  4. Close the rechargeable battery lid.

### 6.4 Mounting the pipette clamp



1. Push the gasket and the groove into the filter adapter.



2. Push the wide opening of the membrane filter into the narrow opening of the pipette adapter.
3. Guide the aspirating cone over the pipette adapter and turn it until it engages.

### 6.5 Checking the leak tightness

1. Insert the pipette.
2. Fill the pipette with water.
3. Hold the pipette vertically.
4. Observe the pipette outlet for approx. 30 seconds.

**i** Do not touch the pipette. Do not press the control buttons.

No water may be allowed to escape.

5. If water escapes, disassemble, and carefully reassemble, the pipette clamp.

## 7 Troubleshooting

### 7.1 General errors

Problem	Cause	Solution
Aspiration capacity reduced.	<ul style="list-style-type: none"> <li>• Membrane filter wetted.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Replace membrane filter.</li> </ul>
Pipette loose.	<ul style="list-style-type: none"> <li>• Pipette adapter damaged.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Replace pipette adapter.</li> </ul>

#### 7.1.1 Rechargeable battery

Problem	Cause	Solution
Rechargeable battery will not charge.	<ul style="list-style-type: none"> <li>• The rechargeable battery is charged.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Disconnect the mains/power supply device.</li> <li>▶ Only charge the rechargeable battery if the status display is blinking.</li> </ul>
No functional period despite fully charged battery.	<ul style="list-style-type: none"> <li>• Rechargeable battery is more then 3 years old.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Replace rechargeable battery.</li> </ul>
Shortened usage period and frequent recharging necessary.	<ul style="list-style-type: none"> <li>• Rechargeable battery capacity is reduced significantly.</li> <li>• Rechargeable battery is more then 3 years old.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Replace rechargeable battery.</li> </ul>
Rechargeable battery housing is warped.	<ul style="list-style-type: none"> <li>• Rechargeable battery is more then 3 years old.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Replace rechargeable battery.</li> </ul>

#### 7.1.2 Liquid

Problem	Cause	Solution
Liquid drips out of the pipette.	<ul style="list-style-type: none"> <li>• Pipette adapter and/or membrane filter inserted incorrectly.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Remove the pipette adapter and membrane filter and reinsert them.</li> </ul>
	<ul style="list-style-type: none"> <li>• Pipette not inserted far enough.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Continue to carefully insert the pipette.</li> </ul>
	<ul style="list-style-type: none"> <li>• Pipette adapter damaged.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Replace pipette adapter.</li> </ul>
	<ul style="list-style-type: none"> <li>• Pipette damaged.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Replace pipette.</li> </ul>
	<ul style="list-style-type: none"> <li>• Seal damaged.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Replace seal.</li> </ul>
	<ul style="list-style-type: none"> <li>• Liquid column too high.</li> <li>• Speed too low.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Slowly press the aspirating button down further.</li> </ul>
Bubble formation in the pipette during liquid aspiration.	<ul style="list-style-type: none"> <li>• Speed too high.</li> </ul>	<ul style="list-style-type: none"> <li>▶ The aspirating button may only be pressed lightly.</li> </ul>

**Technical data**

Easypet® 3

English (EN)

**8 Technical data****8.1 Weight/dimensions**

Weight	134 g (0.295 lb) (without rechargeable battery, without pipette)
--------	--

**8.2 Mains/power supply device**

Input voltage	100 V – 240 V AC, $\pm 10\%$
Frequency	50 Hz – 60 Hz
Output voltage	5 V
Input current	200 mA – 250 mA
Output current	1 A

**8.3 Rechargeable battery**

Type	Lithium-Polymer
Voltage	3.7 V
Capacity	1100 mAh
Charging time	~3 h
Weight	26 g (0.057 lb)
Number of dispensings	~2000 (with a 25-mL pipette)

**8.4 Ambient conditions**

Ambience	Only for use indoors.
Ambient temperature	5 °C – 40 °C
Relative humidity	10 % – 95 %, non-condensing.
Atmospheric pressure	79.5 kPa – 106 kPa

## 9 Transport, storage and disposal

### 9.1 Decontamination before shipment



**CAUTION! Use of a contaminated device may result in personal injuries and damage to the device.**

- ▶ Clean and decontaminate the device in accordance with the cleaning instructions before shipping or storage.

Hazardous substances are:

- solutions presenting a hazard to health
  - potentially infectious agents
  - organic solvents and reagents
  - radioactive substances
  - proteins presenting a hazard to health
  - DNA
1. Please note the information in the document "Decontamination certificate for product returns".  
It is available as PDF document on our website [www.eppendorf.com/decontamination](http://www.eppendorf.com/decontamination).
  2. Enter the serial number of the device in the decontamination certificate.
  3. Enclose the completed decontamination certificate for returned goods with the device.
  4. Send the device to Eppendorf AG or an authorized service center.

### 9.2 Transport

- ▶ Use the original packing for transport.

	Air temperature	Relative humidity	Atmospheric pressure
General transport	-25 °C – 60 °C	10 % – 95 %	30 kPa – 106 kPa
Air freight	-40 °C – 45 °C	10 % – 95 %	30 kPa – 106 kPa

### 9.3 Storage



**NOTICE! Damage to device due to incorrect storage.**

- ▶ Remove the rechargeable battery if you will not be using the device for an extended period (> 2 months).
- ▶ Do not store the device while the pipette is inserted.
- ▶ Select a secure storage location.
- ▶ Do not expose the device to aggressive gases over an extended period.

	<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
Without transport packing	-5 °C – 45 °C	10 % – 95 %	70 kPa – 106 kPa



## 9.4 Disposal

In case the product is to be disposed of, the relevant legal regulations are to be observed.

### Information on the disposal of electrical and electronic devices in the European Community:

Within the European Community, the disposal of electrical devices is regulated by national regulations based on EU Directive 2002/96/EC pertaining to waste electrical and electronic equipment (WEEE).

According to these regulations, any devices supplied after August 13, 2005, in the business-to-business sphere, to which this product is assigned, may no longer be disposed of in municipal or domestic waste. They are marked with the following symbol to indicate this:

As disposal regulations may differ from country to country within the EU, please contact your supplier if necessary.



### **WARNING! Risk of explosion and fire due to overheated rechargeable batteries and other batteries.**

- ▶ Do not heat rechargeable batteries and other batteries to temperatures above 60 °C and do not throw them into a fire.

### **Disposing of accumulators and batteries**

Do not dispose of accumulators and batteries as household waste. Dispose of accumulators and batteries according to the locally applicable legal regulations.



**Ordering information**Easypet® 3  
English (EN)**10 Ordering information**

Order no. (International)	Order no. (North America)	Description
4430 000.018	4430000018	<b>Easypet 3</b> Incl. power supply, wall mount, depositing stand, 2 membrane filters (unsterile) 0.45 µm

**10.1 Accessories**

Order no. (International)	Order no. (North America)	Description
4420 801.004	022236105	<b>Pipette adapter</b>
		<b>Membrane filter</b> sterile, 1 set (5 pieces)
4421 601.009	022232002	0.45 µm
4430 606.005	4430606005	0.2 µm
		<b>Seal for filter adapter</b> 5 pieces
4421 602.005	4421602005	
4430 601.003	4430601003	<b>Aspirating cone</b>
4430 602.000	4430602000	<b>Rechargeable battery compartment lid</b>
4430 603.006	4430603006	<b>Shelf stand</b>
4430 604.002	4430604002	<b>Wall mount</b>
4430 605.009	4430605009	<b>Lithium polymer rechargeable battery</b>
4430 607.001	4430607001	<b>Sticky tape</b> 2 pieces
		<b>Power supply with power plug adapters</b> for pipettes and charger stand
4986 603.005	4986603005	

**10.2 Serological pipettes**

Order no. (International)	Order no. (North America)	Description
0030 127.692	0030127692	<b>Eppendorf Serological Pipet, 1 mL</b> 4 boxes of 200 (800 pieces)
0030 127.706	0030127706	<b>Eppendorf Serological Pipet, 2 mL</b> 4 boxes of 150 (600 pieces)
0030 127.714	0030127714	<b>Eppendorf Serological Pipet, 5 mL</b> 4 boxes of 100 (400 pieces)
0030 127.722	0030127722	<b>Eppendorf Serological Pipet, 10 mL</b> 4 boxes of 100 (400 pieces)
0030 127.730	0030127730	<b>Eppendorf Serological Pipet, 25 mL</b> 4 boxes of 50 (200 pieces)
0030 127.749	0030127749	<b>Eppendorf Serological Pipet, 50 mL</b> 4 boxes of 40 (160 pieces)

# Declaration of Conformity

The product named below fulfills the requirements of directives and standards listed. In the case of unauthorized modifications to the product or an unintended use this declaration becomes invalid.

**Product name:**

EasyPet® 3

including charging adapter

**Product type:**

Electric pipette controller

**Relevant directives / standards:**

2014/35/EU EN 61010- 1

2014/30/EU EN 55011/B, EN 61326- 1

2011/65/EU EN 50581

Date: February 23, 2016



Management Board



Portfolio Management

Your local distributor: [www.eppendorf.com/contact](http://www.eppendorf.com/contact)  
Eppendorf AG - 22331 Hamburg - Germany  
[eppendorf@eppendorf.com](mailto:eppendorf@eppendorf.com)

Eppendorf® and the Eppendorf logo are registered trademarks of Eppendorf AG, Germany.  
U.S. Design Patents are listed on [www.eppendorf.com/ip](http://www.eppendorf.com/ip).  
All rights reserved, incl. graphics and pictures. Copyright 2015 © by Eppendorf AG.

[www.eppendorf.com](http://www.eppendorf.com)

ISO 9001  
Certified

ISO  
13485  
Certified

ISO  
14001  
Certified





# Evaluate Your Manual

Give us your feedback.  
[www.eppendorf.com/manualfeedback](http://www.eppendorf.com/manualfeedback)

**Your local distributor: [www.eppendorf.com/contact](http://www.eppendorf.com/contact)**  
Eppendorf AG · Barkhausenweg 1 · 22339 Hamburg · Germany  
[eppendorf@eppendorf.com](mailto:eppendorf@eppendorf.com) · [www.eppendorf.com](http://www.eppendorf.com)