Pipette Filler

User Manual



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1. YOUR NEW PIPET FILLER

The Pipette Filler has been carefully designed and manufactured as a lightweight, cordless Pipette Filler. Pipette Filler offers simple, efficient pipetting performance and maximum pipetting comfort.
It can be used with all plastic or glass pipettes between 0.1-100ml.

2. UNPACKING AND PREPARING THE PIPETTE FILLER FOR USE

The Pipette Filler package contains the following items:

- Pipette Filler (1)
- AC-adapter (1)
- 0.45μm hydrophobic filter (1)
- User Manual (1)
- Quality control certificate (1)
- Wall-mouted Holder (1)
- Two-position stand (1)

If you are missing any of the above items, please contact our service representative.

2.1. Charging the Pipette Filler

Before the first use the battery must be charged for 10 hours. Allow the unit to charge anywhere from 2 to 3 hours for all subsequent recharging. More than 8 hours of intermittent use is typical when fully charged.

- Before connecting the AC-adapter to the electrical outlet, check that its voltage setting corresponding to the voltage of your electrical outlet.
- Connect the AC-adapter to the electrical outlet and to the electrical fitting at the base of the handle of the Pipette Filler (Fig. 1).



Fig.1

Note: The Pipette Filler should only be charged with the AC-adapter provided.
An icon on the LCD display indicates the level of battery charge - the more bars, the greater the charge.
Special circuitry prevents overcharging of the battery and allows the Pipette Filler to be charged or partially charged at any convenient time.

2.2. Electrical specifications

Battery: 3.7 V, 1100mA, rechargeable lithium-ion battery
Charging time 10 hours for completely drained batteries
AC-adapter: Input AC 100-240V
Output voltage 4.2V, 500mA.

3. PIPETTE FILLER OVERIVIEW (Fig. 2)



Fig.2

4. PIPETTE FILLER DESCRIPTION

4.1. Operating buttons

The Pipette Filler has two operating buttons located at the front of the handle. The upper button enables aspiration for as long as the button is held down. The lower button allows for dispensing. The aspiration and dispensing speeds can be fine-tuned during operation by applying varying finger pressure on the operating buttons.

4.2. Speed adjustment button

The speed adjustment button is located at the upper part of the handle. The desired speed is set by pushing the speed adjustment button.

4.3. Nose cone and silicone adaptor

The pipet adapter provided with the Pipette Filler allows the use of all standard plastic and glass pipets (graduated and non-graduated) including Pasteur pipets. The pipet adapter of the Pipette Filler consists of the nose cone and silicone adapter. The silicon adapter enables a pipet to fit securely in place, thus creating a proper vacuum level and prevents leakage.

4.4. Filters

Removing the nose cone and silicone adaptor exposes a hydrophobic filter (0.45 micron), located at the top of the nose piece. The filter protects the Pipette Filler from accidental over-aspiration. It is strongly recommended to use only the original filters supplied by the manufacturer with the Pipette Filler.
Note: the Pipette Filler cannot be operated without a filter. Wetting of filter due to overfilling will slow or prevent fluid movement. If overfilling occurs, change the filter immediately.

5. OPERATING THE PIPETTE FILLER

5.1. Setting the operating speed

The button located under the digital display at the upper part of the handle, allows you to set your aspiration and dispensing speeds (Fig. 3). Eight speeds are available for each function. Simply push"+" for faster and "-" for slower speeds. Your selection will be displayed on the LCD screen.
The Pipette Filler can self-regulate the aspiration and dispensing speeds by circuit feedback.
Note: The aspiration and dispensing speeds can be fine-tuned during operation by applying a varying amount of finger pressure to the operating buttons.



Fig.3

5.2. Inserting a serological pipet

Gently push a serological pipet into the silicone adapter and ensure that it fits securely. To insert the serological pipet safely, hold the Pipette Filler firmly by the nose cone and the serological pipet from the top end of the tube.

5.3. Aspiration

- Select a speed and fill the pipet by pressing the aspirating button. Fill the pipet just above the desired level, check level by the meniscus.
- Remove the serological pipet from the sample.
- Adjust the volume of the sample by pressing the dispensing button until the meniscus is at the required level.

5.4. Dispensing

The Pipette Filler offers two different dispensing modes:

- If the dispensing button is pressed only partially to a point where a check can be felt, the dispensing function will be based on the force of gravity and the liquid will simply flow out.
- Pressing the dispensing button further in will engage the motor and activates the blow-out function.

Note: Finger pressure can be varied to fine-tune the speed within each mode.

5.5 Other pipetting recommendations

- Use the instrument within the limits of its chemical resistance.
- Never use with highly flammable liquids.
- Observe the reagent manufacturer's safety information.
- Never use the instrument in an atmosphere with a danger of explosion.
- Never use force with the Pipette Filler.
- Should the instrument fail to function properly, stop pipetting and check the Trouble Shooting section.

6. MAINTENANCE

The Pipette Filler has been designed for easy in-house maintenance.

6.1. Decontamination

To decontaminate, lightly spray the outside of the Pipette Filler with the decontamination spray and wipe dry with a clean cloth.

6.2. Changing the nose cone, silicone adapter and filter (Fig. 4)

To change the nose cone, silicone adapter and filter firmly hold the nose cone by the ribbed collar, rotate the nose cone counter-clockwise until completely loosen and pull out the nose cone and the silicone adapter. The filter can be removed by simply pulling it out once the nose cone and the silicone adapter have been disengaged. Position the new filter with the colored side downwards. To reassemble, insert the adapter and nose cone and twist the nose cone gently clockwise.

Note: It is recommended to check and clean the silicone adapter every six months, or when necessary, to prevent a loss of vacuum. If there is a loss of vacuum, please contact the manufacturer or your local distributor.



Fig.4

Cat No.	Product
17000105	Silicone adapter for Pipette Filler
17000094	Nose cone for Pipette Filler
17000103	Filter 0.45µm

The Pipette Filler cannot be operated without a filter. Wetting of filter due to overfilling will slow or prevent fluid movement. If overfilling occurs, change the filter immediately. Only use filters supplied by the manufacturer.

6.3. Changing the battery (Fig. 5 and Fig. 6)

If the battery needs be replaced follow these steps to replace the battery:

- Take the lid off the battery compartment to expose the battery compartment (Fig. 5).
- Disconnect the plug of the Lithium-ion battery from the Printed Circuit Board (PCB) connector inside the battery compartment exposing a 2pin connector on the PCB (Fig. 6).
- Connect the 2 pin plug of the new Lithium-ion battery to the exposed 2 pin connector on the PCB. The side of the plug with the exposed metal tabs, should face away from the PCB, Fig 7. If the battery is connected with the plug in the wrong orientation, you will not see a display on the LCD screen.



Fig.5



Fig.6

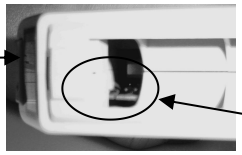

Fig.7



Fig.8

- Replace the battery compartment lid.
- Dispose of the battery appropriately.

Note: Only use the original battery supplied by the manufacturer.

7. STORAGE

The Pipette Filler should not be stored for a long period of time without removing the serological pipet. It is recommended to disconnect the Pipette Filler from the AC-adapter if the unit is not used for a lengthy period of time.

8. TROUBLE SHOOTING

Problem	Cause	Solution
Reduced aspiration capacity or the Pipette Filler is blocked	- Filter blocked, dirty or damaged -Battery low	-Replace the filter -Recharge
Serological pipet drips	-Serological pipet not securely attached -Silicone adapter or nose cone loose -Silicone adapter or nose cone damaged	-Reattach serological pipet -Reassemble silicone adapter or nose cone -Replace silicone adapter or nose cone
Reduced operating time	-Battery worn	-Replace battery
No display	-Dead battery -Battery plugged in the wrong orientation -Failure of the Printed Circuit Board	-Replace battery -Refer to section 6.3 of manual to plug battery in correctly. -Call the manufacturer Tech Support

9. WARRANTY INFORMATION

The Pipette Filler is warranted for one year against defects in materials and workmanship (Battery is warranted for three months only). Should your Pipette Filler fail to function according to specifications at any time, please contact the local representative immediately. The warranty will not cover defects caused by normal wear or by a breach of the manufacturer's recommendations.

Each Pipette Filler is tested before shipping by the manufacturer. The Quality Assurance Procedure guarantees that the Pipette Filler you have purchased is ready for use.