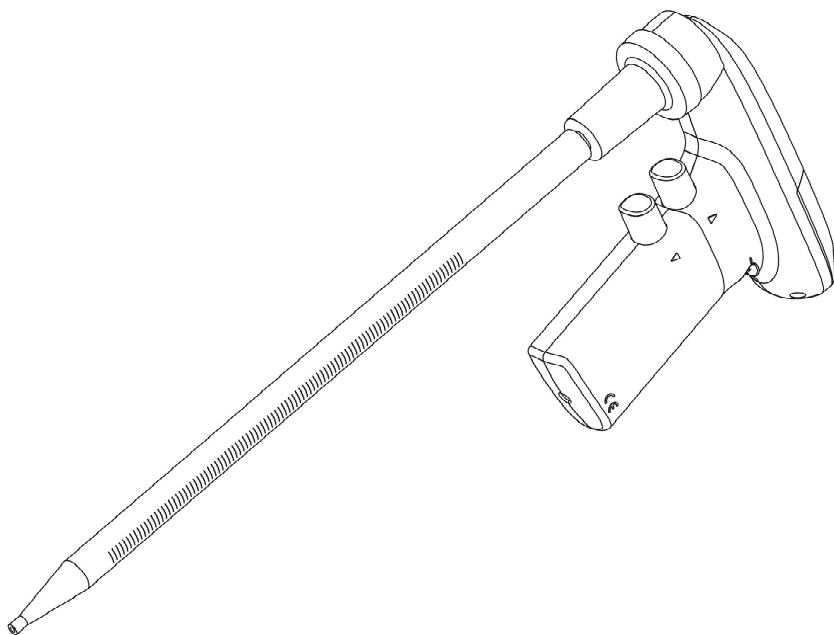


Pipette Controller for liquid handling

Pipette Mate[®] **NEO**

User's Manual



Pipette Mate[®] **NEO**

Features

- Light (167g) weight and ergonomic design
- Autoclavable Head fitting, Tube holder and filter (121°C, 20min)
- Compatible with glass and plastic pipettes from 1-100ml
- Continuous speed control wheel which can be fixed designated speed
- Long life rechargeable Lithium-ion battery
- Blow-out and Gravity dispense selection
- Self-stand design
- UV-resistant housing
- Complies with CE and RoHS

Standard accessories

- Pipette controller (Inc. Lithium-ion battery and Filter)
- Hydrophobic filter 0.2ul
- Travel charger
- User's manual

When unpacking package, check to make sure that the above-mentioned items are included.

Precautions on safety

- For using your Pipette Mate NEO properly and safely, carefully read "Precautions on safety" in this paragraph and "CAUTION" on the next page before starting work with it.
- Contents of "CAUTION" are matters that require user's attention, not only for using Pipette Mate NEO properly but for preventing user from accidents and physical damage.
- After reading this manual, please keep it in a convenient place for referring to at any time.

Please read following prior to use for your safety and correct usage.



CAUTION

**Be sure to observe the following instructions for using
Pipette Mate NEO properly and safely.**

If user misuses "Pipette Mate NEO", or disregards the following instructions, it may result in injury to the user or/and other persons or physical damage to pipette or/and other equipment.

1. Do not use the controller for any purpose other than pipetting/dispensing liquid.
2. Do not modify the controller because modification may cause an accident.
3. Do not use the controller for pipetting any liquid to be injected into human body.
4. Do not expel dispensed liquid towards anybody.
5. Do not eject tip towards anybody.
6. Do not eject tip with liquid inside.
7. Do not slant the controller when liquid is inside of tip.
8. Make sure tip is secured. When using large tip such as 100ml, support the tip with another hand to avoid falling off.
9. If pipette is contaminated with liquid harmful to human, immediately take appropriate disposal to clean it safely before continuing to work.
10. When using infections, radioactive, toxic and other solutions which may cause health risks, please observe appropriate safety precautions.
11. Do not use the controller in a potentially explosive environment or with potentially explosive, flammable liquids.
12. The controller cannot be used with solvents whose vapors attack silicon, ABS, PP, NBR and PVDF.
13. If any harmful liquids are on the controller, please take appropriate treatment before using it.
14. Do not touch the controller after drying, because it will have got very hot during drying. Direct contact with the hot controller may cause injury.
15. Do not dispense/aspirate more than maximum volume of tips.
16. This controller contains a small Lithium-ion battery (Battery). Do not expose the controller to high temperatures or volatile solvents for long hours. If the controller is exposed to liquid and there is a risk of it penetrating inside, immediately stop using it and contact the local distributors.
17. Do not remove the battery from the controller. If you need to replace the battery, contact the local distributors. The old battery will be returned to the customer after replacing new one, and dispose the old battery according to the rules of your affiliation.
18. Be sure to use the supplied charger (Travel charger).
19. When disposing of this controller, please dispose of it according to the rules of your affiliation as a "small electronic goods with rechargeable battery that cannot be removed".
20. Since the parts that can be autoclaved (121°C, 20 minutes) will be very hot immediately after the autoclaving, be careful of a burn.
21. If you notice any abnormalities such as the main body becoming abnormally hot during use or charging, immediately stop using the controller and contact the local distributors.

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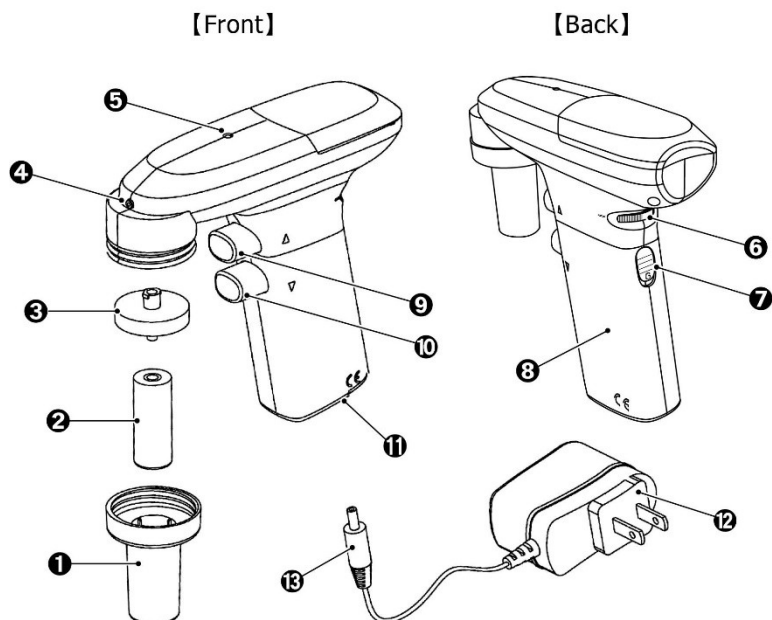
Important notice

This controller contains a small Lithium-ion battery (Battery). The battery was not fully charged at the time of purchase. Be sure to charge the battery for at least 4 hours with the power supply in your environment, regardless of the remaining battery level (color of the battery indicator, see page 6).

Do not leave the controller in a high temperature environment or an atmosphere of volatilized solvents for long hours. If the controller is exposed to liquid and there is a risk of it penetrating inside, immediately stop using it and contact the local distributors. The battery is non-removable. Do not remove it forcibly. If you need to replace the battery, contact the local distributors. Be sure to use the supplied Travel charger.

As one of our activities to protect our environment, we would ask all of our customers to discard disused items properly based on local conditions.

1. General descriptions



- The Head fitting, Tube holder, and Filter in 【Front】 are disassembled for the explanation.
- The shape of the Travel charger might be changed depending on the manufacturing period.
- When using the controller, hold the grip as shown in the figure on the right (The figure shows the use of right hand. The left hand can also be used).



2. Operating Procedure

To aspirate:

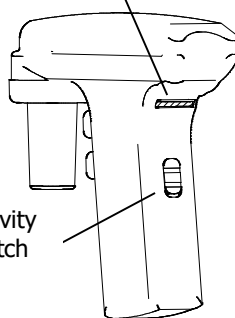
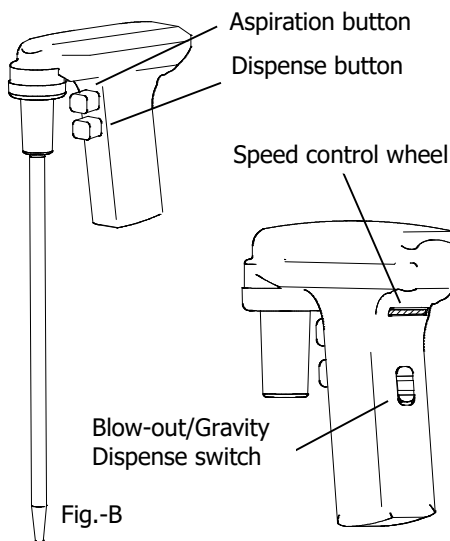
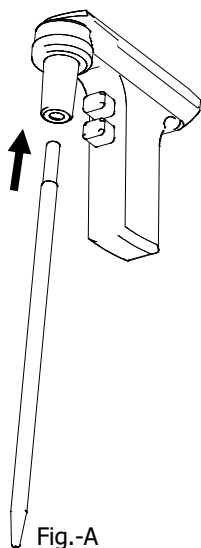
- 1) Carefully hold the pipette and insert it securely into the Head fitting and Tube holder (Figure-A).
- 2) Select the pipetting speed by rotate the speed control wheel(Figure-C).
- 3) Press down the upper push button(Figure-B).

Note: Do not dispense/aspirate more than maximum volume of tips. It would cause malfunction of the controller.

Note: Do not slant the controller when liquid is inside of tip. Liquid entrance into the controller would cause malfunction of the controller.

To Dispense:

- 1) In "Blow-Out mode", press down the lower push button(Figure-C).
- 2) If "Gravity mode(G)" is chosen, the liquid in the pipette is dispensed by gravity only. The flow rate is regulated by the pressure applied to the lower push button(Figure-B).



3. How to recharge the battery

Please charge the battery for 4 hours before first-time operation.

When the battery indicator(LED) turns red (low battery), follow the steps below to recharge the battery.

- 1) Connect the DC power plug of the Travel charger to the DC power jack.
- 2) Plug the Travel charger with external power source.
- 3) The battery indicator will turn orange during charging period.
- 4) After the battery is fully charged, the battery indicator will turn green again.
The charging period may take about 4 hours.

Note: 1. Please do not over-charge the battery for a long period of time.

2. The controller can be operated during recharging period.

3. When battery is fully charged, the controller can be used about 8 hours.

4. Do not touch the Travel charger with wet hand. It would cause electric shock.

4. Self-inverted design

Pipette Mate NEO, without a holder, or stand, can be self-inverted on the bench as shown in the Figure D below.

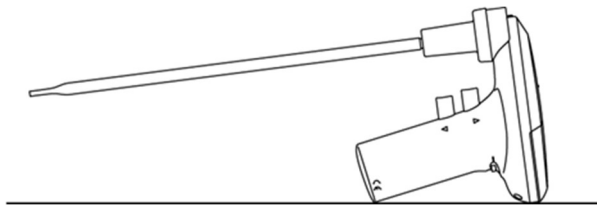


Fig.-D

5. How to replace filter and tube holder

The hydrophobic filter will require occasional replacement, particularly when aspirating speed is decreased.

- 1) Rotate the Head fitting counter-clockwise direction to loose it (See Fig. E).
- 2) Remove or replace the wetted, dirty filter and worn Tube holder with the new ones. Reassemble the device.
- 3) When setting the filter or holder, just follow reverse procedure from 2) to 1).

Note: Do not set the filter and holder in wrong direction.

Note: Do not use the controller without a filter. Liquid entrance into the controller would cause malfunction of the controller.

6. Autoclave

Head fitting, Tube holder and Filter are autoclavable. When autoclaving, carry on at condition of 121°C for 20 minutes based on the procedure mentioned below.

- 1) Please follow the instructions mentioned on "6. How to replace filter and tube holder" when disassembling Head fitting, Tube holder and Filter.
- 2) As autoclaving is completed, dry the pipette completely.

Note: Autoclave may discolor the parts, but this does not affect performance for the controller.

Note: The parts cannot be used right after autoclave due to high temperature. please use after cooling them down.

7. Cleaning

Please take off the charger before cleaning. The controller can be disinfected with disinfectant (i.e. 60% isopropanol, 70% ethanol or detergent).

8. Specifications

Type of tip	1-100ml Plastic/Glass pipette
Dispense mode	Selection for Powered/Gravity
Speed control wheel	Continuous
Power	AC100-240V 50~60Hz DC5V 1.2A
Filter	Hydrophobic, ϕ 25, Pore size 0.22um
Autoclave	Head fitting, Tube holder, Filter
Usage temperature	10-35°C
Usage humidity	RH:0-85%
Lithium-ion Battery	600mAh/3.6V Li-Ion or above, Li-Ion
Weight	167g
Housing material	ABS
Head fitting material	PP

9. Spare parts list

No.	Description	Code	Q'ty
1	Head Fitting	00-PM-N005	1
2	Tube Holder	00-PM-N013	1
3	Travel charger	00-PM-N024	1
4	0.2um filter	00-PM-N100	5

10. Troubleshooting

Symptom	Cause	Remedy
Aspiration speed	Blocked filter	Filter replacement
	Broken filter	
	Low battery	Battery charge
Charging failure	No charger connection	Plug in
	Broken Travel charger	Travel charger replacement
	No jack connection	Plug in
Liquid drip	Pipette looseness	Secure pipette
	Scratch or deformity for Tube holder or pipette	Tube holder or pipette replacement
Pipette looseness	Scratch or abrasion on Tube holder	Tube holder replacement

If the problems cannot be resolved with the solution above, please contact the local distributors to arrange a service. Please note that the controller is not contaminated before arranging the service.

Dear users,

As one of our activities to protect our environment, we would ask all of our customers to discard disused items properly based on local conditions.

■ Warranty

The Pipette Mate NEOs are covered by a warranty for one year against defects in materials and workmanship. This period begins from the date of purchase, and within this period all defective parts will be replaced at no charge by manufacturer. The warranty does not cover defects caused by excessive wear and tear or damage due to shipping, accident, abuse, misuse, problems with electrical power, or usage not in accordance with product instructions, or if other than original spare parts supplied by the manufacturer have been used. Each controller is tested and documented by the manufacturer before shipping.

For repair, service or information you may contact your local distributor.



Distributor:

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