

Bel-Art SP SCIENCEWARE™

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INSTRUCTIONS



Ergopet™ Powered Pipettor 37908 Series

PRINCIPLE OF OPERATION

The Ergopet™ Powered Pipettor is a portable motorized pipettor powered by a set of rechargeable batteries. This power source drives a small motor, which operates a small peristaltic mechanism which provides suction and pressure delivered to a pipette adapter. The pipettor is operated by individual push buttons that control aspiration and dispensing of the liquids.

The Ergopet™ Powered Pipettor contains a replaceable hydrophobic filter that prevents liquid from entering the unit during aspiration and helps avoid contamination during discharge. Replaceable sterile filters are available as an accessory for use with the unit.

ERGONOMIC RANGE OF ADJUSTMENT

The head of pipettor can be positioned straight ahead in line with the hand or swung up to 90° left or right. This allows unobstructed viewing of the pipette while aspirating and dispensing, all while maintaining a more natural hand position. The nosepiece of the pipettor can also be rotated to change the angle of the pipette from vertical to 15° outwards.

SPECIFICATIONS	LENGTH	WEIGHT
I CAT. No. F 37908-0011	19.1 CM 7-1/2"	286 GM 10.1 OZ
II CAT. No. F 37908-0012	29.2 CM 11-1/2"	324 GM 11.4 OZ
III CAT. No. F 37908-0013	39.4 CM 15-1/2"	362 GM 12.8 OZ
IV CAT. No. F 37908-0014	49.5 CM 19-1/2"	400 GM 14.1 OZ

Speed: 10ml in 3-4 seconds

Power (charger): 120 volt charger, output 3VDC, 200mAh Batteries: Two standard 1.2V AA NiMH, replaceable

Battery Operation Life: A full battery charge performs a full day's work.

Battery Service Life: Batteries can be charged approximately 500 times and provide 2 to 4 years of service in average use. Batteries will hold approximately 90 % of their charge for one week without usage.

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Charge Time: The pipettor will recharge in approximately 14 hours from total discharge. Less charging time is needed if only partially discharged.

PIPETTE SIZE RANGE

Glass or plastic pipettes 1-100 ml, with an outside mouth diameter of 3.0 to 9.9 mm will fit into the pipette holder.

HOUSING

The Ergopet™ housing is made of ABS plastic. The housing may be cleaned with a mild detergent such as Bel-Art's Aquet® (Catalog #17094-0030). Be sure to wipe off the detergent with a moist towel. Do not immerse the entire unit in any fluid.

FILTER

Each Ergopet™ contains a 25 mm, 0.2 micron PTFE hydrophobic filter that will not allow water to pass through it. This protects the inside of the unit from contamination if it is accidentally overfilled. If the filter becomes wet from overfilling a pipette, it must be replaced (Catalog # H37908-0250).

WARNING

This pipette must not be used or recharged in an atmosphere with danger of explosion.

HOW TO USE THE ERGOPET™ POWERED PIPETTOR

FIRST TIME USE

To assemble batteries into the pipettor - remove the battery cover in the handle and then insert the two NiMH AA batteries into the unit.

Before using Ergopet™ Powered Pipettor for the first time, be sure to charge the unit for the 14 hours. This ensures maximum battery life.

Note: The Ergopet™ Powered Pipettor must be fully charged before initial use or overall battery life will be reduced.

CHARGING AND RECHARGING THE BATTERIES

When the pipettor pick-up and dispense speed begins to slow, the batteries are low on energy and need to be re-charged.

- Insert the wall charger's single plug connector into the charger jack located at the bottom of the Ergopet™ memory pipettor.
- 2. Plug wall charger into a compatible outlet and charge for a minimum of 14 hours.

OPERATION

- 1. While holding the Ergopet™ by the head, insert pipette firmly into the silicone pipette holder.
- 2. The top button controls fluid aspiration and the bottom button controls the dispensing of the fluid from the pipette.
- 3. To fill the pipette, gently press the top button. Release button to stop aspiration
- 4. To dispense by gravity, gently press the bottom button. This will allow discharge without activating the motor. To discharge rapidly, increase pressure on the button to activate the motor.

MAINTENANCE PROCEDURES

REPLACEMENT OF BATTERIES

- 1. Remove screw from battery cover in base of handle.
- 2. Remove battery cover
- 3. Remove the two NiMH AA batteries.
- 4. Replace with two new NiMH AA batteries, capacity of 2000mAh minimum.
- 5. Please note the battery polarities. Both batteries must be located with the + end facing upwards toward the pipettor head.
- 6. Re-insert the battery cover and screw.

REPLACING THE FILTER

Replace the filter every two to four weeks depending on usage. The filter must be replaced when it gets wet, (Catalog #H37908-0250). If suction is noticeably decreased, the filter may be clogged and should be replaced. The filter is located within the blue swiveling barrel. Remove the blue barrel by gently pushing down and outwards on the three tabs to release the barrel from the pipettor head. Gently pull on the silicone chuck to remove it and the replaceable filter from the pipettor. Replace the filter by pressing the shorter luer end of the filter into the silicone chuck. Reassemble the filter and chuck to the pipettor and reinstall the barrel.

ERGOPET™ POWERED PIPETTOR TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	ACTION
Pipettor does not work and there is no motor sound	Batteries need to be charged	Charge pipettor for 51/2 hours
	Charger not working. Charger not plugged into pipettor correctly	Check charger for proper operation and that charger plug has fully entered the jack in the pipettor.
Pipettor does not work but there is motor sound	Filter is clogged	Replace filter
	Peristaltic tubing link is not primed	Raise pipettor speed setting to a faster position and run 3 or 4 cycles to prime tube.
	Peristaltic tubing is kinked	Remove tubing from spindle. Roll between fingers to remove kink. Reinstall tubing.
Pipettor works but only holds a charge for short periods of time	Batteries need full charging	Charge batteries for 14 hours.
	Batteries have reached their full life span.	Replace batteries
Pipette leaks when attached to pipettor	Silicone pipette adapter is worn out or damaged	Replace pipette adapter
	Pipette is not secured to the silicone pipette adapter.	Re-adjust pipette so it fits in to the pipette adapter securely. (See specifications to determine if proper pipette is being used).
	Filter may have been removed	Replace filter.
Pipette does not stay in the adapter	Pipette is too small	See specifications to determine if proper pipette is being used
Pipette does not stay in the adaptor	Pipette is too small	See specifications for recommended pipette size
	Silicone pipette adapter is worn out or damaged	Replace pipette adapter