



INSTRUCTION FOR USE

Pulse Vortex Mixer

Disclaimer

Thank you for choosing the Pulse Vortex Mixer. To ensure a better user experience, please carefully read this user manual and adhere to safety operating procedures.

Please keep this user manual properly for future reference when needed.

Important Notes



Warning!

Please ensure that only personnel trained in the relevant procedures operate and use this instrument.

Adhere to safety regulations, personal safety, and accident prevention standards.

It is strictly prohibited to operate the instrument or plug/unplug the power in wet conditions.

Avoid placing the instrument on a shaky or uneven working surface.

Do not shake samples exceeding 50% of the container capacity, and ensure that sample containers have lids to prevent liquid spills.



Danger!

During operation, it is essential to wear protective clothing to prevent entanglement of the body, hair, and jewelry.

Never place the instrument in flammable, explosive, or underwater environments, and avoid using it with hazardous substances.

If resonance or displacement occurs during the operation of the instrument, immediately stop the operation or reduce the running speed.

Ensure that sample tubes are kept vertical and positioned in the center to prevent imbalance-induced ejection of sample tubes.

1. Overview

The Pulse Vortex Mixer is characterized by its compact size and rapid, thorough mixing. The liquid forms a vortex, ensuring complete blending even for substances adhering to the tube walls. It is suitable for uniformly mixing liquids in common test tubes, centrifuge tubes, flasks, pipettes, and funnels. It effectively blends challenging substances like erythromycin and staining solutions.

2. Structure



1. Silicone Vibrating Head

2. Machine Body

3. Metal Base

3. Product Features

- (1) Compact and portable appearance for easy carrying.
- (2) DC brushless motor provides powerful and maintenance-free operation.
- (3) Imported silicone vibrating head with strong toughness, sufficient elasticity, and long service life.
- (4) Samples can quickly form a vortex within 5 seconds.
- (5) Press to start, stepless speed adjustment, convenient operation, and wide application.
- (6) Equipped with flexible shock-absorbing pads, metal base for excellent stability, low operational noise, and no displacement during operation.

4. Product Parameters

Model	Vortex-1
Input Power	12W
Output Power	10W
Voltage Range	100-240v 50/60Hz
Power Supply	12V1A
Voltage range	100-4,200RPM
Drive Mode	Brushless DC Motor
Base Material	Aluminum Alloy
Operating Mode	Press for Pulse Operation
Orbit	4.5mm
Max capacity	50ml
Switching Mode	Connect Power Supply
Weight	425g
Overall Dimensions	110×110×80mm
Outer Packaging Dimensions	230×175×110mm

5. Equipment Installation

Selection of Operating Environment

Caution! Please adhere to the following requirements when selecting the operating environment:

- (1) The working environment should be kept clean and dry.
- (2) Avoid direct sunlight, drastic temperature fluctuations, and air convection.
- (3) Place the instrument away from doors, windows, radiators, and air conditioner vents.
- (4) Ensure the instrument is positioned on a level and stable workbench.
- (5) The workbench should be located in an area with minimal vibration interference.
- (6) Keep the instrument away from objects and devices with magnetic properties or that generate a magnetic field.
- (7) Do not use the instrument in areas with explosive hazards.
- (8) Avoid prolonged use of the instrument in high humidity or high dust environments.

Equipment Installation

- (1) After unpacking, remove all packaging and remove the cushion sponge.
- (2) Place the vortex mixer on a stable, vibration-free workbench, ensuring it is as level as possible.
- (3) Insert the output end of the power adapter into the power socket located at the back of the instrument.

6. Equipment Utilization



Caution!

Before using the instrument, please check if it is in good condition and inspect the silicone vibrating head and foot pads for any signs of looseness or contamination:

Operating Instructions:

- (1) Plug the power adapter into the power socket (Power: AC220V 50HZ).
- (2) Place the sample tube with the mixed sample in the center of the vibrating head and ensure the sample tube is kept vertical.
- (3) Gently press the sample tube to start the vibration. The indicator light will illuminate, and you can achieve the desired speed using the speed control knob.
- (4) After mixing is complete, separate the sample tube from the vibrating head to stop the operation.

7. Maintenance



Caution!

Power must be cut off before performing maintenance on the instrument. Wear protective gloves when cleaning the instrument.

Operating Instructions:

- (1) Keep the instrument clean to prevent solutions from entering the interior.
- (2) Wipe the vibrating head, machine body, and foot pads with a soft cloth soaked in a neutral detergent, followed by a clean cloth soaked in distilled water.
- (3) Implement shock-absorbing and anti-collision measures during transportation.
- (4) When the instrument is not in use for an extended period, cut off the power supply and store the instrument, along with its accessories, properly.

8. Fault Analysis



Warning!

After a malfunction occurs, the power should be cut off first, unplug the plug, and only resume use after the issue has been resolved.

Number	Fault Phenomenon	Cause Analysis	Solution
1	The instrument does not rotate	Power not connected	Check the power supply and connect it
		Power adapter damaged	Replace the power adapter (output: DC 12V/1A).
		Internal circuit or components damaged	Please contact the manufacturer's maintenance personnel
2	Excessive vibration of the instrument during operation	The sample tube is not placed vertically in the center of the vibrating head	Place the sample tube in the center of the vibrating head and try to keep it vertical
		Vibrating head is loose	Reinstall or replace the vibrating head
		Foot pad damaged or contaminated	Clean the foot pad or replace the foot pad

9. Warranty Statement

The warranty period for our company's products is one year from the date of sale. During the warranty period, users can replace or repair products with quality issues free of charge with the warranty card and commercial invoice. The warranty does not cover the following cases:

- (1) Warranty period has expired.
- (2) Damage to the instrument caused by user negligence.
- (3) Instrument damage due to user failure to follow the instructions.
- (4) Instrument damage caused by exposure to environments with radioactive or corrosive substances.
- (5) User disassembly or unauthorized repair and adjustment resulting in instrument damage.

10. Packing List

Number	Contents	Quantity
1	Vortex Mixer Main Unit	1
2	Power Supply Adapter	1
3	User Manual	1
4	Certificate of Conformity, Warranty Card	1