

## Operation Manual



BBSW-101

## Shaking Water Bath

Thank you very much for Choosing Biolab products. Please read the "Operating Instructions" and "Warranty" before operating this unit to assure proper operation.

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# 01 Application range

This type of product is suitable for medical institutions, colleges, mining and refining industries, food processing and agriculture researchers. It is typically used to cultivate bacteria and microorganism and other experiments in the field of biochemistry, microbiology, genetics, cell.

# 02 Features

1. This series is a new generation of products.
  - i) BBSW-101 model: with function of rotating vibration.
  - ii) BBSW-102 model: with two vibration functions of rotating and reciprocating.
  - iii) BBSW-103 model: with function of reciprocating vibration.
2. The product is made of high quality steel plate, and surface has electrostatic spray. Water tank is made of clean and anti-corrosion stainless steel.
3. Stainless steel heating tube is safe and efficient. Thermal insulation layer is filled with thermal insulation material.
4. Temperature controller uses microcomputer technology and LED displayer, accurate and reliable. It has timing and over-temperature alarm devices.
5. Oscillator adopts stepless speed regulation with smooth operation. The clamp is made of stainless steel spring universal clamp, easy to use.
6. The water in tank gets heat from heat pipe, and heats samples indirectly. The temperature changing is small, so it can play a good effect of constant temperature.

# 03 Main technical parameters

1. Temperature control range: ambient +5°C~100°C
2. Temperature fluctuation:  $\pm 0.5^{\circ}\text{C}$
3. Temperature uniformity:  $\pm 0.5^{\circ}\text{C}$
4. Timer range: 0~120min
5. Electric power: ~220V/50Hz
6. Input power: 1550 VA
7. Oscillation frequency: 50~280
8. Vibration amplitude: 30 mm
9. Chamber volume: 46×39×15 cm
10. Boundary dimension: 71×46×43cm
11. Package size: 82×64×51cm
12. Net weight/Gross weight: 38/55 KG

## 04 Instructions

1. Place product on horizontal smooth plane, add water into the tank. The water level has to be higher than heat pipe.
2. Get through 220V/50Hz power, The power socket should have a reliable grounding.

3. Instrument operation instruction:



SP

- i). Press [SET] key, upper side displays Lower Nixie tube displays set temperature.

- ii). Press ▲, ▼ key to set the temperature

- iii). Press [SET] key, upper side displays or Lower side displays set time.



SE



SF

- iv). Press ▲, ▼ key to set set time.

- v). Press [SET] key to back to working state screen.

Note: Set time as 0 when timing function is in no need. Or the heating does not work, and working state is continuous at this time.

4. Turn on the oscillator switch, adjust speed knob to required position slowly.
5. Adjust the timer knob to appropriate location when require timing function, to be 'ON', closed position.
6. Please shut down the power when operation ends.

## 05 Important information

1. The equipment should be placed at smooth, steady and well-ventilated place, and make sure it is in level. Do not expose to direct sunlight.
2. Power supply must have an effective grounding. There is fuse back of the equipment. If the device can't get power on, please check whether the fuse is good first. Please cut off the power when inspect and replace, and replace the same specification.
3. Please cut off the power first before placing or removing anything from the container.
4. Instrument surface should not contact with volatile chemicals such as gasoline, rubber water.
5. Please shut off the power when machine is not in use. Please remove the water in the tank and use dry cloth to wipe it up.

## 06 Transportation and storage

1. Handle carefully when moving and do not exceed the inclination angle of 45°. Do not move it upside down.
2. Keep it in well ventilated room with the RH below 80%, and without corrosive gas.

## 07 After-sales service

In the warranty period of 1 year, our company guarantees maintenance, replacement, and returning. In the warranty period if the malfunction or breakage is made not by the customers, we will repair free of charge or change the parts. After 1-year period, we will try our best to serve the customers and provide convenience to the customers.

## 08 Equipment maintenance

Malfunction	Reason	Measures
No power	1.No power supply of outlet	1.Check outlet
	2.Unplugged or disconnected	2.Check plug or connection
	3.Fuse open circuit	3. Change fuse tube
	1.No power supply of outlet	4.Turn on the switch
Large differences of the temperatures.	1. Thermocouple is damaged.	1.Change thermocouple
	2. Instrument is not modified.	2.Correction
	3. Water level is too low.	3.Higher water level
3.No rise of temperature	1. Set temperature is low.	1.Adjust set temperature
	2. Electric heating tube is damaged.	2.Replace electric heating tube
	3. Temperature controller is damaged.	3.Replace temperature controller
	4.Time setting is wrong.	4.Reset or cancel
4.Unable to start vibration	1. Switch is not open	1.Turn on the switch
	2. Time is up	2.Reset or transfer to"ON"
	3. Motor is bad.	3.Replace

The above maintenance should be fulfilled by qualified staff.

 Turn off the power before maintenance!

## 09 Packing list

Item	Description	Category	Qty	Remarks
1	Shaking water bath	Main	1	
2	Manual	Documents	1	
5	Packing list	Documents	1	
6	Cartridge fuse	Parts	1	
7	AC	Parts	1	


The listed items are in accord with the actual packed articles.

Packing QC: (signature)

Packing date:



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