Laboratory Incubator

Operation Manual

1. Scope of Application

This is an indispensable device for bacteria keeping and biological cultivation in medical,pharmaceutical,biological and agricultural organizations and scientific research institutes.

2. Technical Parameters

Model	DNP-9018
Power supply	220V 50Hz
Control range	Room temperature +5~65°C
Temperature Fluctuation	±0.5°C
Power Consumption	≤100w
Dimensions	250×250×300
Remarks	A: stainless steel bladder

3. Structure

Laboratory Incubator is in vertical style. The body of the incubator and the door are made of cold-rolled sheet, and their exterior surface is coated with paint, There are double glass windows on the door. The items cultivated inside the incubator can be observed without opening the door. The working chamber is made of steel plates or stainless steel plates; and the shelf can be moved.Sealing ring of silicon rubber is fitted in between the work chamber and the door to ensure the air tightness of the inner door and the work chamber ,providing gentle flow of air ensuring uniformity of temperature inside the chamber Glass wool is stuffed in between the shell of the incubator and the work chamber for the purpose of heat insulation.

Power switch and temperature controller fitted on the upper part of the incubator The temperature controller is of high precision, and has digital display for the pre-set temperature and the actual temperature inside the incubator .A protection device is prepared for pre-set temperature ,and also has the function of tracking and giving alarm.

4. Operation guide

4.1.Shift the power switch to the position "ON".The power indicator will be on, and digits will display on the temperature controller.

4.2.Set temperature controller to the setting position, and the digital displayer will show the pre-set temperature.Press the ▲ key to increase the set temperature; press the ▼ key to reduce the set temperature, you can set the required temperature.The heating indicator will be on, and the temperature will start to rise. When the actual temperature displayed is approaching and close to the pre-set temperature, the heating indicator will flash with the actual temperature displayed slightly exceeding the pre-set one and fall back for several times.Then,the temperature will be controlled under a thermostatic state (Note:referto "Operation guide"for intelligent temperature controller.)

4.3.Open the door, and place the items to be cultivated into the incubator.Then,close the doors. If the doors are kept open for a long time, the inner temperature May fluctuate, which is quite normal.

4.4.While the items are being cultivated, refrain from opening the door except when opening the door to put in or take out items,as it may affect the desired temperature.

4.5.Selct the cultivating time span according to specific requirements. After cultivation is

over, turn the power switch to the position "OFF",If the cultivated items are not to be taken out immediately,don,t open the door.

5. Precautions

5.1. For safe use of the equipment, there shall be a ground connection for the incubator.

5.2. The incubator shall be placed in a room with excellent ventilation conditios.No inflammable substance shall be placed around the equipment.

5.3. The items for cultivation shall not be overcrowded in the bow,instead,some space shall be kept between the items.

6. Problems and Solutions

Problems	Cause	Solutions
1.No Power Supply	1.Check the plug and electric lines; 2.Check the fuse.	1.Keep the plug well in position or connect the broken lines; 2.Replace the fuse.
2.The inside temperature doesn·t rise	1.Low pre-set temperature; 2.Heater(s) malfunctioned; 3.Temperature control apparatus malfuncfioned.	1.Re-set the temperature; 2.Replace the heater(s); 3.Replace the temperature control apparatus.
3.Big difference between the pre-set temperature and inside temperature	1.Temperarure sensor malfunctioned; 2.Trim potentiometer for temperature pre-set requires adjustment.	1.Replace the sensor; 2.Adjust the potenfiometer.
4.Alarming for temperature in excess	1.Over low pre-set temperature; 2.Temperature control apparatus malfunctioned	1.Re-set the temperature; 2.Replace the temperature control apparatus.