FOUR E'S SCIENTIFIC

Operating Instructions

Mini Dry Bath Incubator



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Safety Instructions

- Read the operating instructions in full before starting up and follow the safety instructions.
- Keep the operating instructions in a place where they can be accessed by everyone.
- Ensure that only trained staff work with the appliance.
- Follow the safety instructions, guidelines, occupational health and safety and accident prevention regulations.
- Socket must be earthed (protective ground contact).
- Before starting the device for the first time, ensure that the connector cable is suitable for the type of socket used and that a safe protective earth connection is assured.
- **Risk of burns!** Exercise caution when touching the housing parts and the heating plate. The heating plate can reach temperatures in excess of 100 °C. Pay attention to the residual heat after switching off. **The device may not be transported unless it is cold!**
- Don't operate the appliance in explosive atmospheres, with hazardous substances or under water.
- Set up the appliance in a spacious area on an even, stable, clean, non-slip, dry and fireproof surface.
- The base plate must be clean and intact.
- The voltage stated on the type plate must correspond to the mains voltage.
- The socket for the mains cord must be easily accessible.
- The power adapter cable must not be allowed to come into contact with the hot mounting plate.
- Check the appliance and accessories before hand for damage each time you use them. Do not use damaged components.
- **Caution!** Only media whose flashpoint lies above the safety temperature limit of 130 °C may be processed or heated with this device.

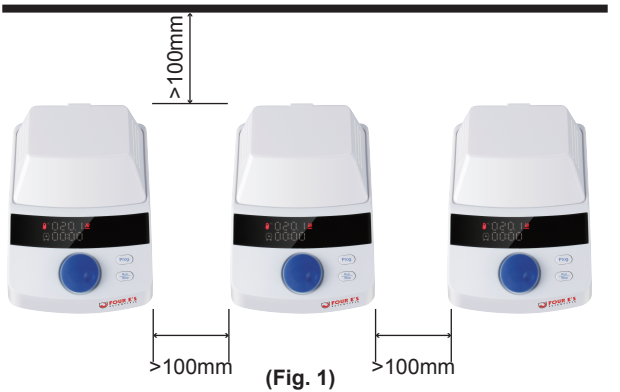
• Beware of hazards due to:
  - Flammable materials
  - Combustible media with a low boiling temperature
  - Incorrect container size
  - Overfilling of media
  - Unsafe condition of container.
• Only process media that will not react dangerously to the extra energy produced through processing. This also applies to any extra energy produced in other ways, e.g. through light irradiation.
• Bear in mind the possibility of contamination that might lead to undesirable chemical reactions.
• Wear your personal protective equipment in accordance with the hazard category of the media to be processed.
  Otherwise there is a risk from:
  - Splashing and evaporation of liquids
  - Ejection of parts
  - Release of toxic or combustible gases



• Do not heat liquid media except with the block. Never pour liquid media directly on to the heating plate!
• Accessories must be securely attached to the machine and can't come off by themselves.
• Always disconnect the plug before fitting accessories.
• Safe operation is only guaranteed with the accessories described in the "Accessories" chapter.
• The appliance must only be disconnected from the mains supply by pulling out the plug-in power supply unit.

To the protection of the equipment.
- The appliance may only be opened by experts.
- Do not cover the device, even partially e.g. with metallic plates or film. This results in overheating.
- Protect the appliance and accessories from bumps and impacts.

- Ensure that the base plate is kept clean.
- Observe the minimum distances between the devices, between the device and the wall and above the assembly (min. 100 mm)



(Fig. 1)

Unpacking

Please unpack the device carefully and check it for damage. It is important that any transport damage is detected when the device is unpacked. If necessary, any inventory of the damage should be made immediately (postal service, railway, haulage company).

package contains:

Item	**Qty.**
Main Unit	1
Power adapter	1
Operating instruction	1

Correct Use

• Use
- For heating media in block heaters
• Range of use
- Laboratories, Schools, Pharmacies and universities

Operation

(Fig. 2)



- **Temperature Setting**
  The temperature setting can only be workable when the machine is powered on but not when it's working. Short press the blue knob; the temperature value on the LED display will flash, and then set the temperature by horizontal rotation of the knob.

- **Time Setting**
  The time setting can only be workable when the machine is powered on but not when it's working. Short press the blue knob twice; the time value on the LED display will flash, and then set the time by horizontal rotation of the knob.

- **Create a new program**
  The system can save 5 sets of programs of the temperature and time. When the machine is powered on but not when working, short press the button of "Prog." to select the 5 default programs from P1 to P5. For example, if select P2, press and rotate horizontally the blue knob to set the new temperature and time as the method described as above. Long press "Prog." continuously to save the new data as P2..

- **Program for quick operation**
  When the machine is powered on but not when working, short press "Prog." to select the required program for quick operation. The program data can be changed by the blue knob

Temperature Calibration

Each single instrument is calibrated before shipment. If there is deviation between the actual temperature and the displayed temperature for some reasons, you can do as follow to calibrate the unit again.

1. Long press the blue knob for more than 3 seconds and the system will be in the calibration mode. When the machine is ready for calibration, there's only temperature on the display and no time.
2. Press "Prog." to select the calibration point of 40°C / 60°C / 80°C / 100°C (If they're not the four calibration points in the program, set the required temperature by rotating the blue knob). Or directly rotate the blue knob to the appointed calibration points instead of pressing "Prog."
3. Put high boiling point solution (above 100°C, for example: glycerin) into the block hole and then place a thermometer into the hole. (Make sure the accuracy of the thermometer should be within 0.1°C and the thermometer probe should be absolutely immersed into the solution). And make sure to put the thermometer into the hole which is in the middle of the block or closed the middle hole.
4. Press the "Run/Stop" and the system will be in "Heating" mode.
5. After about 20 minutes of the "Holding" mode, read the data from the thermometer and press "Run/Stop". Adjust the temperature of the machine by rotating the blue knob per the reading of the thermometer.
6. Long press "Prog" to save the reading of the thermometer.
7. Repeat the above processes to do the calibration of other calibration points. Refer to the below Table.

8. Restart the machine after the calibration.

Temperature Calibration

Item	Calibration Point	Reading of the thermometer
1	40°C	
2	60°C	
3	80°C	
4	100°C	

Maintenance and Cleaning

The appliance is subject only to the natural wear and tear of components and their statistical failure rate. Use only cleansing agents which have been approved by us to clean our devices.

To remove use:

Dyes	isopropyl alcohol
Constructions materials	water containing tenside / isopropyl alcohol
Cosmetics	water containing tenside / isopropyl alcohol
Foodstuffs	water containing tenside
Fuels	water containing tenside

For materials which are not listed, please request information from us. Please disconnect the main plug and do not allow moisture to get into the appliance when cleaning. Wear the proper protective gloves during cleaning of the devices. Electrical devices may not be placed in the cleansing agent for the purpose of cleaning. Before using another then the recommended method for cleaning or decontamination, the user must ascertain with the manufacturer that this method does not destroy the instrument.

Technical Data

Model	TC0401005	TC0401006
Temperature Control Range	RT + 5°C~100°C	RT + 5°C~100°C
Heating Lid	No	Yes
Timing Range	0~99h59min	0~99h59min
Temp. Control Accuracy	±0.5°C	±0.5°C
Display Accuracy	±0.1°C	±0.1°C
Heating Time (40°C to100°C Temp.)	≤15min	≤15min
Input Power	40W	45W
Dimension (mm)	164 x 116 x 98	164 x 116 x 98
Net Weight	0.9kg	0.9kg

Warranty

You have purchased an original laboratory machine which meets the highest engineering and quality standards. In accordance with our warranty conditions, the warranty period is 24 months . For claims under the warranty please contact your local dealer. You may also send the machine directly to our works, enclosing the delivery invoice and giving reasons for the claim. You will be liable for freight costs.