Hanna Instruments HI839800-02

Hanna Instruments HI839800-02 Heating Block User Manual

For COD Determination with 25 Tubes, 25mm Diameter

1. Introduction

This manual provides essential information for the proper operation and maintenance of the Hanna Instruments HI839800-02 Heating Block. This device is designed for Chemical Oxygen Demand (COD) determination, accommodating 25 tubes with a 25mm diameter. Please read this manual thoroughly before using the instrument to ensure safe and efficient operation.

2. Safety Information

WARNING: Always follow safety precautions to prevent injury or damage to the instrument.

- Ensure the heating block is placed on a stable, heat-resistant surface.
- Do not operate the instrument near flammable materials.
- Always wear appropriate personal protective equipment (PPE), such as heat-resistant gloves and eye protection, when handling hot tubes or the heating block.
- Allow the heating block and tubes to cool completely before cleaning or moving.
- Disconnect the power supply before performing any maintenance or if the instrument is not in use.
- Do not immerse the heating block in water or other liquids.
- Only use tubes specified for COD determination with a 25mm diameter.

3. Setup

Follow these steps for the initial setup of your HI839800-02 Heating Block:

1. **Unpacking:** Carefully remove the heating block from its packaging. Inspect for any signs of damage during transit.
2. **Placement:** Place the heating block on a flat, stable, and heat-resistant laboratory bench, ensuring adequate ventilation around the unit.

3. **Power Connection:** Connect the power cord to the instrument's power inlet and then to a grounded electrical outlet. Ensure the voltage matches the instrument's requirements.
4. **Initial Power On:** Press the power button to turn on the unit. The LCD will illuminate, displaying the current temperature and time settings.

Figure 1: The Hanna Instruments HI839800-02 Heating Block, showing the main unit with tube slots and control panel.

4. Operating Instructions

The HI839800-02 Heating Block features an LCD screen for simultaneous display of temperature and time, and programmable settings for digestion.

1. **Preparing Samples:** Prepare your COD samples according to standard laboratory procedures, transferring them into 25mm diameter reaction tubes.
2. **Inserting Tubes:** Carefully insert the prepared reaction tubes into the 25 available slots on the heating block. Ensure they are seated properly.
3. **Setting Temperature:** Use the control panel buttons to set the desired digestion temperature. Refer to your specific COD method for the correct temperature. The LCD will display the set temperature.
4. **Setting Time:** Use the control panel buttons to set the desired digestion time. The LCD will display the set time.

5. **Starting Digestion:** Press the START button to begin the heating process. The instrument will heat up to the set temperature and maintain it for the programmed duration. The remaining time will be displayed on the LCD.
6. **Monitoring:** Monitor the digestion process. The LCD provides real-time updates on temperature and remaining time.
7. **Completion:** Once the digestion time is complete, the heating block will emit an audible alert and/or display a completion message. The heating element will turn off.
8. **Cooling and Removal:** Allow the tubes and heating block to cool down to a safe temperature before carefully removing the tubes using appropriate heat-resistant tools.

Note: Always consult your specific COD method for precise temperature and time settings.

5. Maintenance

Regular maintenance ensures the longevity and accuracy of your HI839800-02 Heating Block.

- **Cleaning:** Disconnect the power cord before cleaning. Use a soft, damp cloth to wipe the exterior of the instrument. Do not use abrasive cleaners or solvents. Ensure no liquid enters the ventilation openings.
- **Tube Slots:** Periodically inspect the tube slots for any residue or debris. Clean with a non-abrasive brush if necessary.
- **Storage:** When not in use for extended periods, store the heating block in a clean, dry environment, away from direct sunlight and extreme temperatures.
- **Calibration:** While the heating block is factory calibrated, periodic temperature verification with a certified thermometer is recommended to ensure accuracy.

6. Troubleshooting

If you encounter issues with your HI839800-02 Heating Block, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Instrument does not power on.	No power supply; faulty power cord; internal fuse.	Check power cord connection and outlet. Try a different outlet. If problem persists, contact customer support.
Temperature not reaching set point.	Incorrect temperature setting; ambient temperature too low; internal heating element issue.	Verify temperature setting. Ensure proper ventilation. If problem persists, contact customer support.
Error message on LCD.	Sensor malfunction; internal fault.	Note the error code and consult the full technical manual or contact customer support.

If the issue is not resolved by the above steps, please contact Hanna Instruments customer support for further assistance.

7. Specifications

- **Model:** HI839800-02
- **Manufacturer:** Hanna Instruments
- **Capacity:** 25 tubes
- **Tube Diameter:** 25 mm (0.98 inches)
- **Display:** LCD with simultaneous temperature and time display
- **Programmable Features:** Temperature and digestion time
- **Dimensions (L x W x H):** 127 x 127 x 127 cm (50 x 50 x 50 inches)
- **Weight:** 22.68 kg (50 lbs)
- **Included Components:** Heating Block

8. Warranty and Support

Hanna Instruments products are warranted against defects in workmanship and materials when used for their intended purpose and maintained according to instructions. Specific warranty terms and conditions may vary by region and product. Please retain your proof of purchase.
For technical support, service, or warranty claims, please contact your local Hanna Instruments distributor or visit the official Hanna Instruments website for contact information.
Website: www.hannainst.com