

Bod Incubator



Introduction

The Standard Operating Procedure (SOP) is to provide guidelines for the safe and efficient operation of a Biological Oxygen Demand (BOD) incubator in a laboratory setting. The BOD incubator is used to maintain controlled environmental conditions for incubation of samples to measure oxygen demand.

Materials

BOD incubator unit

Sample containers with BOD samples

Distilled water (if required for humidification)

Thermometer (if temperature control is not built-in)

Test settings

Pre-Operational Preparations

- Ensure that the BOD incubator is clean, free from debris, and in proper working condition.
- Set the desired temperature on the BOD incubator, following the manufacturer's instructions. If using a thermometer, set the temperature accordingly.

- If the BOD incubator requires humidification, fill the water reservoir with distilled water as per the manufacturer's instruction.
- Ensure the availability of suitable sample containers with BOD samples.
- Wear appropriate PPE, including a lab coat, gloves, and safety glasses.

Testing procedure

- Place the sample containers with BOD samples inside the BOD incubator, ensuring they are stable and properly positioned.
- Close the door of the BOD incubator and latch it securely to maintain airtight conditions.
- Set the desired incubation temperature on the BOD incubator. Ensure it matches the requirements specified in the test method or protocol.
- If humidification is required, follow the manufacturer's instructions to activate the humidification system and set the desired humidity level.
- Allow the BOD incubator to reach the set temperature and humidity levels. This may take some time depending on the incubator model and sample volume.
- Monitor the temperature and humidity levels inside the BOD incubator using the built-in controls or external thermometer/hygrometer, ensuring they remain within the specified range.
- Periodically check the samples inside the BOD incubator for any signs of contamination, leaks, or irregularities.
- If required, rotate or shuffle the sample containers inside the BOD incubator to ensure even exposure to the incubation conditions.
- Record the start time and date of the incubation in a logbook or appropriate records.

Periodic Monitoring

- Regularly monitor the temperature and humidity levels inside the BOD incubator throughout the incubation period.
- Check for any equipment malfunctions, abnormal readings, or deviations from the set parameters.
- Address any issues immediately by notifying the laboratory manager or relevant personnel.

Post-Incubation

At the end of the incubation period, carefully remove the sample containers from the BOD incubator. Inspect the samples for any changes or growth observed during the incubation.

Handle and dispose of the samples according to the laboratory's waste management protocols.

Safety Precautions

- Follow all laboratory safety protocols and guidelines while operating the BOD incubator.
- Avoid opening the BOD incubator unnecessarily during operation to prevent temperature and humidity fluctuations.
- Use caution when handling sample containers to prevent spills or breakage.
Do not touch the BOD incubator unit or its electrical components with wet hands or when the unit is powered on.
- If required, use appropriate precautions to prevent contamination of samples and cross-contamination between different samples.