

Revision: ----	Document Code: WI- ML- 6420	Standard Operating Procedure (SOP) for FG Incubator	 دانشگاه علوم پزشکی و خدمات بهداشتی و درمانی استان خراسان واحد پزشکی
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Operating and Maintenance Instructions: FG Incubator (Model: CM55E)

1. Purpose

To define the standard operating procedure for the Iranian-made FG CM55E incubator to ensure precise temperature control for microbial cultivation.

2. Scope of Application

This device is designed for precise temperature regulation within the range of 20°C to 80°C .

3. Responsibility

Laboratory experts are responsible for the correct implementation of these procedures.

4. Operating Procedures

- **Control Interface:**
- **SET:** Press to enter setup mode. The displayed value will flash; use **UP/DOWN** keys to adjust the temperature.
- **UP / DOWN:** Used to adjust temperature and time parameters.
- **C/F:** Toggles the temperature unit between Celsius and Fahrenheit.
- **Display:** The screen indicates the current temperature, set points, time, and an active heater indicator light.
- **Note:** To extend display lifespan, the screen may dim automatically during operation. Press the **C/F** key to reactivate it if necessary.
- **Operational Requirements:** The effective range is 5°C above ambient temperature up to 80°C . For optimal stability, ensure the ambient temperature does not exceed 30°C .
- **Humidity:** Maintain up to 40% relative humidity by placing a water tray/beaker inside the chamber.

5. Safety Precautions

- **Operational Integrity:** Ensure the door is properly closed at all times.
- **Sample Management:** Securely arrange samples on the shelves.
- **Electrical Safety:** Always disconnect the device from the power source before cleaning or performing maintenance.
- **Decontamination:** Ensure the unit is decontaminated, cleaned, and unplugged before any repair work.

6. Maintenance Guidelines

- **Thermal Efficiency:** Minimize the time the door remains open to prevent heat loss.
- **Humidity Control:** Keep a water-filled container inside the chamber to sustain humidity levels.
- **Cleaning & Disinfection:**

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- Perform thorough cleaning/disinfection monthly, and immediately following any infectious spills, using a 10% hypochlorite solution or Deconex.
- Clean surfaces with a soft cloth and a mild detergent. Avoid contact between cleaning agents and electrical components.
- Ensure the interior is completely dry before reconnecting to the power supply.
- **Monitoring & Documentation:**
- Measure the internal temperature daily using a calibrated thermometer and record readings twice daily on the temperature chart.
- All maintenance, cleaning, and daily temperature logs must be recorded in the designated laboratory journals.
- **Reporting:** If the incubator temperature falls outside the acceptable range, notify the technical supervisor immediately.

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