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| Revision:<br>---- | Document Code:<br>WI- ML-6482 | Document Title: Standard Operating Procedure (SOP) for<br>Anoxomat Anaerobic System |  <p>دانشگاه علوم پزشکی<br/>و خدمات بهداشتی و درمانی استان خراسان<br/>واحد پژوهشی</p> |
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## Standard Operating Procedure (SOP): Anoxomat Anaerobic Cultivation System

### 1. Objective

To define the standard operating procedures for the operation and maintenance of the Iranian-made Anoxomat anaerobic system, used for cultivating anaerobic, microaerophilic, and capnophilic bacteria.

### 2. Scope

This procedure applies to the controlled atmosphere generation within anaerobic jars using the Anoxomat system to support specific microbial growth requirements.

### 3. Responsibility

The responsibility for implementing this procedure lies with the designated laboratory experts.

## 4. Operating Procedure

#### 1. Power Up:

- Turn on the main power switch located on the rear of the device.
- Press the Power button on the front control panel (labeled "1") to activate the system.

#### 2. Atmosphere Selection:

- Select the desired environment by pressing the corresponding control button:

- Button 2:** Anaerobic conditions.
- Button 3:** Microaerophilic conditions.

- 3. Verification:** Always use indicator strips inside the jars to verify that the required anaerobic/microaerophilic conditions have been successfully achieved and maintained.

## 5. Safety Precautions

- PPE:** Always wear gloves and protective eyewear when handling anaerobic jars.
- Structural Integrity:** Inspect jars before each use. Never use jars that are cracked, chipped, or structurally compromised.
- Thermal Shock:** Avoid exposing jars to sudden temperature changes or thermal shock.
- Decontamination:** Sterilize all jars and accessories thoroughly after each use according to established laboratory biosafety protocols.

## 6. Maintenance and Care

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- **Cleaning:** Thoroughly clean the jars after every use to remove microbial or chemical contaminants.
- **Sterilization:** Regular sterilization is mandatory, specifically before initial use and following each cleaning cycle.
- **Seal Integrity:** Regularly inspect the jar lid gaskets. Ensure the lid is securely closed and perfectly sealed to prevent oxygen ingress.
- **Gas Pack Handling:** If using chemical gas packs (activated by water), any unused activated packs must be kept under a laboratory hood until the chemical reaction is complete and safe to dispose of.
- **Physical Protection:** Handle jars with care to prevent impact or drops, which can lead to breakage or hairline cracks.
- **Storage:** Store jars in a temperature-controlled environment, away from direct sunlight and excessive heat sources.

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