

# SOP: Instrument Cleaning and Sterilization Guidelines

This SOP details the **instrument cleaning and sterilization guidelines**, covering the proper procedures for cleaning, disinfecting, and sterilizing medical and laboratory instruments. It includes steps for pre-cleaning, choosing appropriate cleaning agents, using sterilization equipment, maintaining sterility during storage, and ensuring compliance with health and safety standards. The goal is to prevent contamination, reduce the risk of infection, and ensure the safety and effectiveness of all instruments used in patient care or laboratory work.

## 1. Purpose

To establish standardized procedures for cleaning and sterilizing instruments to prevent contamination and ensure safety and effectiveness in medical and laboratory environments.

## 2. Scope

This SOP applies to all personnel responsible for handling, cleaning, and sterilizing reusable medical and laboratory instruments.

## 3. Responsibilities

- All staff must follow this SOP.
- Supervisors must ensure correct implementation and training.
- Quality assurance personnel should monitor compliance.

## 4. Definitions

- **Cleaning:** Removal of visible soil, debris, and other contaminants.
- **Disinfection:** Elimination of many or all pathogenic microorganisms, except bacterial spores.
- **Sterilization:** Destruction of all forms of microbial life, including spores.

## 5. Procedure

1. **Pre-Cleaning**
  - Immediately after use, remove gross debris from instruments.
  - Rinse instruments in cool or lukewarm water to prevent protein coagulation.
2. **Cleaning**
  - Select a suitable cleaning agent (enzymatic detergents or approved disinfectants).
  - Manually clean with brushes or use an ultrasonic cleaner, paying attention to hinges and crevices.
  - Rinse thoroughly with distilled or deionized water.
3. **Inspection**
  - Visually inspect instruments for cleanliness, integrity, and function.
  - Separate damaged or malfunctioning instruments for repair or disposal.
4. **Disinfection (if required)**
  - Immerse instruments in an approved disinfectant for the recommended time.
  - Rinse thoroughly after disinfection.
5. **Sterilization**
  - Arrange instruments in sterilization trays, ensuring all surfaces are exposed.
  - Choose appropriate sterilization method (e.g., autoclave, dry heat, chemical, or gas).
  - Follow manufacturer's instructions for loading and operating sterilization equipment.
6. **Post-Sterilization Handling**
  - Allow instruments to cool before handling.
  - Check chemical indicators and log sterilization results.
7. **Storage**
  - Store sterilized instruments in clean, dry, and designated sterile areas.
  - Preserve sterility by minimizing handling and exposure.

## 6. Documentation

- Maintain cleaning, disinfection, and sterilization records for all instruments.
- Log equipment maintenance and validation results.

## 7. Compliance & Safety

- Follow all relevant health and safety regulations (e.g., OSHA, CDC, or local guidelines).
- Wear appropriate PPE (gloves, masks, gowns, eye protection) during procedures.

## 8. References

- Manufacturer instructions for use (IFUs)
- CDC Guidelines for Disinfection and Sterilization in Healthcare Facilities
- OSHA standards for handling hazardous materials

## 9. Revision History

Revision	Date	Description/Changes	Approved By
1.0	2024-06-01	Initial Release	[Name]