

Contact:

Director of Risk Management - 541-956-7061

Legal References:

- OAR 437, Division 2, Subdivision I - Personal Protective Equipment
- Oregon OSHA 1910.1030 - Bloodborne Pathogens
- ANSI/AAMI ST79:2017 - Comprehensive Guide to Steam Sterilization and Sterility Assurance in Health Care Facilities
- CDC Guidelines for Infection Control in Dental Health-Care Settings (2003, updated 2016)

Purpose

The purpose of this program is to ensure the **safe operation, maintenance, and monitoring of all autoclaves and sterilizers** used within the Allied Health, Dental, and Science Department programs at **Rogue Community College (RCC)**.

Autoclaves and sterilizers are used to eliminate microbial life and sterilize instruments, laboratory materials, and biological waste. Improper operation or maintenance may result in **burns, pressure-related injuries, chemical exposure, or inadequate sterilization**, leading to infection or contamination risks.

This program establishes the procedures, responsibilities, and safety practices necessary to prevent injury, equipment damage, and contamination while ensuring compliance with regulatory standards.

Standard Precautions

All materials placed into or removed from autoclaves or sterilizers must be treated as **potentially contaminated until sterilization is verified**.

All students, faculty, and staff are responsible for following safe practices, using required PPE, and maintaining a safe laboratory environment.

Required Personal Protective Equipment (PPE):

- Heat-resistant gloves
- Lab coat or gown
- Closed-toe shoes
- Safety goggles or face shield

Long sleeves should be rolled down, and all loose clothing or jewelry must be secured before operating any sterilization unit.

PPE must be worn when:

- Loading or unloading autoclaves/sterilizers
- Handling instruments before or after sterilization
- Working with chemical sterilants or cleaning agents

Engineering Controls

Departments using autoclaves or sterilizers must ensure:

- All units are **installed, maintained, and operated** according to manufacturer specifications and RCC Risk Management guidelines.
- **Operating instructions and emergency shutdown procedures** are posted near each unit.
- **Pressure gauges, safety valves, and door seals** are inspected regularly.
- Chemical sterilizers are **properly vented** and have **spill control materials** nearby.
- **Routine calibration and preventive maintenance** are completed by authorized personnel and communicated to Risk Management.

Risk Management and department supervisors will review these controls annually.

Work Practice Controls

Safe work practices are required to minimize risk of exposure, injury, or equipment malfunction. These include:

- Confirming **load compatibility** with sterilization type (steam, dry heat, or chemical).
- Verifying all containers are open or vented prior to sterilization.
- Allowing chambers to **depressurize and cool fully** before unloading.
- Avoiding contact with **hot surfaces, steam, or chemicals**.
- Labeling all sterilized items clearly with cycle date and operator initials.
- Maintaining clear, uncluttered areas around all sterilization equipment.

Safe Work Practices

Only individuals who have completed **Risk Management-approved training** may operate autoclaves or sterilizers.

Pre-Use Inspection

- Check gaskets, seals, gauges, and indicator lights.
- Report leaks, cracks, or malfunctions immediately.
- Do not operate any damaged or malfunctioning unit.

Loading

- Do not overload trays or obstruct air/steam flow.
- Arrange items for even circulation.
- Use trays rated for sterilizer use and ensure all containers are vented or unsealed.
- Use secondary pans to contain potential spills.

Operation

- Select the correct cycle for load type (liquids, instruments, waste, etc.).
- Ensure the chamber door is fully latched before starting.
- Never open the door while the unit is operating or pressurized.
- For chemical sterilizers, follow the SDS for all solutions and ensure adequate ventilation.

Unloading

- Wait until the **pressure reads zero** and temperature is below **100°C (212°F)**.
- Stand back when opening the door to avoid steam exposure.
- Allow materials to cool before handling; use tongs or heat-resistant gloves if needed.

Testing and Monitoring

Daily - Physical Parameters

Operators must visually or electronically verify that:

- The autoclave or sterilizer reaches the required **temperature and pressure levels**.
- The autoclave or sterilization cycle is completed for the correct duration.

Weekly - Chemical Indicators

- Use **Class 1 indicators** (external) to verify heat exposure.
- Use **Class 5 integrators** (internal) to confirm exposure to proper time, temperature, and steam conditions.

Monthly - Biological Indicators (Spore Testing)

- Place spore-containing test strips inside representative loads.
- Incubate post-cycle; **no microbial growth** confirms successful sterilization.
- Failed results require immediate equipment shutdown and corrective action.

Annual - Comprehensive Validation

A certified technician must perform **annual calibration and performance testing** including:

- Gauge calibration
- Seal and valve integrity checks
- Review of maintenance and testing logs
- Assessment of any recurring problems

Biological and Chemical Monitoring

Each department must document autoclave and sterilization performance by recording:

- Date and time of each cycle
- Operator's name
- Type of load
- Cycle parameters
- Indicator results

Logs must be retained for at least **five years** or longer if required by accreditation or regulation.

Maintenance and Inspection

- Departments must maintain a **use and maintenance log** for each unit.
- Preventive maintenance will be conducted per manufacturer recommendations and recorded.
- Units failing a biological or mechanical test must be tagged "**Out of Service**" until repaired and revalidated.
- Risk Management will coordinate annual calibration and inspections.

Injury or Exposure Procedures

If a burn, scald, chemical splash, or other injury occurs:

1. Provide **immediate first aid** (cool burns with running water or rinse chemical exposure for 15 minutes).
2. Notify your **supervisor/instructor** and **Campus Security** immediately.
3. Seek **medical evaluation** promptly; call 911 for serious injuries.
4. File an **online Accident/Injury Report**.
5. If potentially infectious materials are involved, follow the **Infection Control Plan** for follow-up and reporting.

Incident Investigation

All autoclave or sterilizer incidents will be investigated by **Risk Management** with input from the supervising department.

Investigations will evaluate:

- Operator training and authorization
- PPE use and adherence to procedures
- Equipment condition and maintenance
- Departmental compliance and supervision

Corrective actions will be implemented to prevent recurrence.

Record Retention

Risk Management will maintain documentation of:

- Operator training and certifications
- Maintenance, calibration, and validation records
- Biological and chemical testing results
- Incident and injury reports

All records will be retained for a minimum of **five years**, or longer if required by law or accreditation standards.

Questions

For any questions, exposure concerns, or reporting of unsafe conditions, contact:

Director of Risk Management
541-956-7061