

MSU Equipment Decontamination from Biological Materials Policy

This document describes the policy and procedures for potentially contaminated laboratory equipment to be safely and legally released for unrestricted use. Adherence to this policy will ensure that employees, students, and members of the public are not exposed to biological materials.

Equipment used in laboratories may be contaminated with biological materials. While laboratory personnel in these environments are protected from potential biological exposures through safety controls and administrative practices, anyone moving or receiving equipment has a right to expect that the equipment is clean and decontaminated.

Responsibility

Ensuring that equipment is cleaned and decontaminated is the responsibility of the owner of the equipment. This could be an individual or the department that purchased the equipment. If the individual abandons equipment, the responsibility for decontamination falls to the department with which the individual was affiliated. Equipment owners must submit a completed [Certification that Property is Free from Hazards](#) form to the receiving entity and to the Biosafety Officer. This will initiate the process of a visual inspection and validation of documentation of the equipment from transfer of ownership by the Biosafety Officer.

The MSU Biosafety Officer has established minimum requirements for proper decontamination of used laboratory equipment that may have been exposed to biological materials, (see [MSU Biosafety Manual](#).)

Procedure

1. The minimum personal protective equipment (PPE) to wear when decontaminating laboratory equipment is a lab coat, gloves, and eye-protection. Additional PPE may be required depending upon contaminants and disinfectants used.
2. All equipment used to handle or store biological agents (i.e., freezers, incubators, centrifuges, etc.) must be decontaminated with an appropriate disinfectant for the biological material and/or equipment.
 - a. An appropriate disinfectant is one that has demonstrated decontamination efficacy with regard to the biological material of concern and has been shown to not create additional hazards during use.
 - b. Consult the following website for information concerning EPA-registered disinfectants:
<http://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants>

- c. Additional information is available through [MSU's Pathogen Safety Data Sheets](#), the Biosafety Officer, or laboratory SOPs.
3. Allow disinfectant to remain on the equipment for the appropriate contact time. In most cases, 30 minutes is sufficient for decontamination with 10% bleach or 70% ethanol. Consult [MSU's Pathogen Safety Data Sheets](#), the Biosafety Officer, or laboratory SOPs.
4. After the equipment has been decontaminated complete a [Certification that Property is Free from Hazards](#) form for each piece of equipment.
 - a. Ensure that the person performing the decontamination procedures signs certifying that the equipment has been appropriately decontaminated.
 - b. Attach the original completed form to the equipment in a visible location. Retain a copy for your records, and scan and submit a copy to the Biosafety Officer.
 - c. The receiving entity shall retain the original for their records.

Equipment Checklist

1. **Refrigerators and Freezers.** Remove all contents, including thermometers, biological materials and chemical reagents. Biological materials must be moved in thermally stable transport containers such as Igloo® or Coleman®-style hard-sided picnic coolers with securing latches. Defrost the refrigerator/freezer if there is a buildup of ice around the freezer compartment. Decontaminate refrigerator/freezer. The refrigerator/freezer must be completely empty prior to being moved.
2. **Incubators.** Remove any remaining samples and drain the water from the jacket and pans. Decontaminate incubators with appropriate disinfectant.
3. **Biological Safety Cabinets.** Remove all tubing and glassware connected to the hood. If the hood is being relocated or placed in storage, decontaminate the work surface of the hood with appropriate disinfectant. If the hood is being discarded or recycled, contact the Biosafety Officer to have the hood decontaminated with paraformaldehyde.
4. **Centrifuges.** Remove tubes holding water or samples from the rotor system. Decontaminate centrifuge with appropriate disinfectant.
5. **Water baths.** Drain the water from the unit and remove any samples or thermometers. Decontaminate water baths with appropriate disinfectant.
6. **Balances or scales.** Wipe clean to remove any remaining contamination inside the balance or on the scale. Decontaminate balances or scales with appropriate disinfectant.
7. **Heating blocks.** Remove samples and thermometers. Decontaminate heating blocks with appropriate disinfectant.
8. **Spectrophotometers.** Disconnect automatic sample feeders holding samples containers or standards, if applicable. Decontaminate spectrophotometers with appropriate disinfectant.