

---

## **STANDARD OPERATING PROCEDURES (SOP)**

### **Use of Tools / Equipment Inside of BSL-3 Containment Areas**

#### **1. SCOPE**

This SOP describes the biosafety considerations and work practices when maintenance personnel enter and bring tools / equipment into and use tools / equipment inside of Biosafety Level 3 (BSL-3) laboratory spaces at the University of Pittsburgh. This SOP incorporates recommendations from the *CDC/NIH Biosafety in Microbiological and Biomedical Laboratories*, 5<sup>th</sup> edition, the University of Pittsburgh Department of Environmental Health and Safety (EH&S), and the University of Pittsburgh Biohazard Committee.

All items including tools and maintenance equipment that is required to be removed from BSL-3 containment areas **MUST** be made of materials (plastics and metal) that can be chemically decontaminated or autoclaved prior to their removal from the BSL-3 containment areas. EH&S recommends that tools and maintenance equipment to be used inside of BSL-3 containment areas should be permanently stored inside the containment area to eliminate the decontamination procedure.

#### **2. PROCEDURE**

**2.1 Considerations for bringing tools / equipment into of BSL-3 containment areas** – The following guidelines are provided to assist in bringing tools / equipment into BSL-3 containment areas to make necessary repairs to research equipment and facility dedicated systems.

2.1.1 All tools / equipment should be made of material that can be decontaminated via chemical disinfection or steam autoclave.

2.1.2 For electronic equipment check with manufacturer's specifications to determine if chemical disinfection will damage the equipment. If damage would occur due to chemical disinfection, consult EH&S for equipment-specific measures.

2.1.3 No cloth material (such as a tool belt) should be brought into BSL-3 containment areas.

2.1.4 Tools made of metal can be autoclaved prior to removal from the BSL-3 containment areas. The autoclave procedure involves high temperature steam that can damage plastic or rubber parts of tools and equipment.

**2.2 Decontamination procedure for tools / equipment that can not be autoclaved prior to removal**

2.2.1 Tools with components made of plastic, rubber, metal and/or electronics **MUST** be surface decontaminated or treated in a chemical submersion bucket (or tank) with an EPA-registered disinfectant prior to removal from the BSL-3 containment areas.

2.2.2 Consult EH&S or DLAR site supervisor for proper disinfectant in use in the facility.

2.2.3 Decontamination process should occur in exit rooms prior to removal of facility required personal protective equipment (PPE).

2.2.4 Disinfectant should be liberally applied to all surfaces of the tools and equipment and allowed to stand on the tools for a minimum of 15 minutes prior to wiping dry or allowing to air dry.

**2.3 Decontamination procedure for tools / equipment that can be autoclaved prior to removal**

- 2.3.1 Tools made of metal can be autoclaved prior to removal from the BSL-3 containment areas.
- 2.3.2 Autoclave cycles should be run at a minimum temperature of 121° for 30min sterile cycle and 5 minute exhaust cycle.
- 2.3.3 Autoclave cycles should be run by designated site personnel. Tools should be placed in available biohazard bags or containers.

**2.4 Decontamination procedure for tools / equipment that remain in a multiple agent/multiple user BSL-3 laboratory suites**

- 2.4.1 Tools that are used and remain in BSL-3 containment in which multiple biological agents are used should be chemically decontaminated or autoclaved prior to storage.

\_\_\_\_\_  
Chairperson, University Biohazards Committee

\_\_\_\_\_  
Date

\_\_\_\_\_  
University Biosafety Officer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Facilities Management

\_\_\_\_\_  
Date