Principal Investigator: Date Approved:

**Decontamination and Disinfection**

This SOP applies to individuals who handle, manipulate, transfer, store or dispose of biohazardous agents. This SOP is intended to complement the liquid biohazardous waste SOP.

Biological agents can pose varying risks of harm to humans, animals and the environment, including life-threatening disease and chronic illnesses. Therefore, appropriate decontamination of equipment and waste is critical to prevent contact with and release of harmful biological agents.

**Personal Protective Equipment**

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**BSL1 or BSL2**



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**BSL2+**

**Engineering Controls, Equipment, and Materials**

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| **Chemical Disinfectant** | A disinfectant that has been validated to deactivate the biological agent of interest. For blood or other potentially infectious material, use an EPA-registered disinfectant |
| **Disposable Absorbent Material** | A material that can absorb liquids and can be disposed as hazardous waste (e.g., paper towels) |

**Procedures**

1. Don appropriate PPE for the live biological agent and the chemical disinfectant
2. If necessary, dilute/reconstitute chemical disinfectant to the concentration required to deactivate the agent, making sure to factor in the volume of liquid waste
3. Disinfect the interior and exterior of the safety cup/rotor following the Decontamination SOP

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| **For Liquids** | **For Solids** |
| **3.** Carefully pour disinfectant into liquid waste so that the final concentration of the disinfectant deactivates the agent | **3.** Apply disinfectant to the contaminated surface so that it is saturated |
| **4.** Wait the contact time required to deactivate the agent (at least 20 minutes) | **4.** Keep the surface saturated for the contact time  required to deactivate the agent |
| **5.** Dispose of decontaminated liquid waste as chemical hazardous waste | **5.** Wipe up chemical disinfectant from saturated area with absorbent materials |
| **NOTE**: *Liquid solutions containing bleach and no other chemicals may be disposed down the drain with copious amounts of water. Other liquids must be disposed of as hazardous chemical waste (use the OEHS LMS to arrange for collection)* | **6.** Dispose of absorbent materials following the SDS recommendations for the disinfectant |

* The disinfectant in use, the active concentration and the required contact time must be defined in the laboratory Biosafety Manual and/or Exposure Control Plan, and approved by the Institutional Biosafety Committee

**Cautions and Considerations**

* Additional PPE may be required to handle the agent and/or the chemical disinfectant
* An appropriate disinfectant that can deactivate your agent is required and varies from agent to agent
* Ensure that the chemical disinfectant used is chemically compatible with any solutions it is mixed in

**References**

1. [Lists of EPA-registered Disinfectants](https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants)
2. [OEHS Chemical Disinfection Fact Sheet](https://d2vxd53ymoe6ju.cloudfront.net/wp-content/uploads/sites/4/20180824082203/Chemical-Disinfection-Fact-Sheet.pdf)
3. Public Health Agency of Canada [Pathogen Safety Data Sheets](http://www.phac-aspc.gc.ca/lab-bio/res/psds-ftss/index-eng.php)
4. [OEHS Fact Sheet on Sodium Hypochlorite compatibility](https://d2vxd53ymoe6ju.cloudfront.net/wp-content/uploads/sites/4/20190227141708/Sodium-Hypochlorite-Bleach-Chemical-Incompatibility-Fact-Sheet.pdf)