Biohazardous Waste

Procedures

Proper treatment, handling and disposal of cultures and items contaminated by potentially biohazardous agents is a vital step toward protection of laboratory and physical plant personnel from infectious disease. This waste handling process is also necessary to prevent the release of potentially infectious agents into the community at large. Treatment and disposal of biological waste is regulated by several federal and state agencies. General guidelines for handling this waste stream are provided below. Additional information regarding these procedures can be found at: http://uwm.edu/usa/safety/bio/

Proper segregation, storage, treatment and disposal of biohazardous waste is essential not only to comply with waste regulations, but more importantly to reduce personnel exposure to potentially infectious materials. An exposure occurs when potentially infectious materials are permitted to enter a person's bloodstream through a break in the skin or contact with the eyes, nose, or mouth. Examples of exposure related to biohazardous waste handling include incidents such as:

- Splashing liquid biological waste into the eye during pour-off for disposal
- Puncturing the skin with a biologically contaminated needle
- Spilling liquids from a ruptured biohazardous bag onto broken, unprotected skin.

In the event of an exposure to potentially infectious materials, take the following actions:

- Wash the exposed skin or flush the mucous membrane for 10-15 minutes.
- Notify the lab director or supervisor and the Department of University Safety and Assurances (229-6339).
- Contact your health care provider to determine the need for evaluation and/or possible treatment.

Sharps

Sharps are generally agreed to be the most hazardous items in the potentially infectious waste stream. A high degree of caution should always be used when handling any sharp object, contaminated or not. All disposable sharps (hypodermic, intravenous or other medical needles and syringes; pasteur pipettes; scalpel or razor blades; blood vials; glass test tubes and centrifuge tubes; microscope slides and coverslips; and any other laboratory glassware that has had contact with infectious agents) must be placed into an approved sharps container immediately following use to reduce puncture risk. An approved sharps container is one that is leakproof, puncture-resistant, closeable and bears the biohazard symbol. Once filled, the container should be permanently closed and disposed of through the UWM Hazardous Waste Program.

Solid Non-Sharps Biohazardous Waste

All non-sharp laboratory materials utilized in experiments with biological materials (e.g., microorganisms, recombinant DNA, cell cultures, etc) must be treated prior to disposal by an approved decontamination method such as autoclaving. These wastes should be stored in bags bearing the biohazard symbol prior to decontamination. While in use for waste storage, biohazard bags must be secured in a manner that will eliminate spillage. If a bag is used primarily for disposal items that are not likely to release liquids (i.e., pipette tips, kim wipes, etc.), a wire bag rack or rigid container is an acceptable means of securing the bag to eliminate spillage. If the bag is used for storage of items that are likely to release liquids and possibly result in leakage, the bag should be stored in a leak-proof container such as a trash can with a lid that is also labeled with the biohazard symbol.

When transporting waste bags to the autoclave for treatment, secure the bags closed with a rubber band, twist tie or other closure device that can be easily removed and place the bags in secondary container such as a pan or bucket. Always use a cart to move the bags if possible.

After autoclaving, any bag displaying the biohazard symbol should be placed in a non-transparent plastic bag or other secondary non-transparent container (i.e., closed cardboard box, dark colored trash bag) prior to disposal into the normal trash. Bags with the biohazard symbol, regardless of use, must not be placed into the regular waste stream without defacing the symbol or overbagging.
Liquid Biohazardous Waste

Human or animal blood and body fluids can be flushed into the sanitary sewer without prior treatment. However, chemical disinfection is recommended prior to disposal if feasible. All other potentially infectious liquids (i.e., media with growth, cell line waste, etc.) must be autoclaved or chemically disinfected before disposal into the sanitary sewer. Do not autoclave waste that are chemically treated as this action may create a chemical exposure hazard.

If using a chemical disinfectant, follow the manufacturer's label instructions regarding concentration and contact time. Also note that disinfectants are hazardous materials that may require the use of additional personal protective equipment to control chemical exposure. Refer to your product's Material Safety Data Sheet (MSDS) for further information or contact the Department of University Safety and Assurances for assistance.