Biohazardous Waste Management

Identification of Biohazard Waste

The following materials are defined as biohazard waste:

1. Sharps.

2. Cultures and stocks of etiologic agents and associated biologicals.

3. Human and animal blood, blood products and body fluids.

4. Animal waste, animal carcasses and body parts.

5. Culture dishes, disposable lab ware, devices used to transfer, inoculate and mix cultures, and other materials which have come in contact with biohazards, including disposable personal protective equipment and clothing.

Segregation and Disposal of Biohazard Waste

- **Sharps** include biologically contaminated objects capable of causing a puncture hazard including needles, razors blades, syringes and other metallic sharps. Sharps should be disposed of in pre-labeled red plastic sharps containers only. Contact UNC Asheville EH&S for disposal.

- **Free flowing liquid waste** is contained in leak proof, rigid durable containers. This container shall contain freshly prepared 10% chlorine bleach and shall be labeled with the biohazard symbol and labeled indicating the presence of bleach. These containers are closed during handling and placed within leak proof secondary containers.

- **Solid biohazard waste** is collected in white polypropylene containers lined with red bags. This outer container must be labeled with the biohazard symbol. Decontaminate outer rigid container with 70% ethanol as needed. The containers should be closed, when not in use. Bags should be autoclaved before disposal.
Decontaminating Biohazard Waste

Steam sterilization of solid waste using an autoclave:

This is the most commonly used method of decontaminating biological waste. Researchers autoclave the waste produced if it is deemed to be environmentally stable. Autoclaves used for waste decontamination purposes require that recordkeeping, training, and quality control checks be performed to assure adequate sterilization conditions. The N.C. Medical Waste Rules require that autoclaves be monitored under conditions of full loading for effectiveness monthly through the use of biological indicators. *Geobacillus stearothermophilus* indicators must be used with average spore populations of $10^4$ to $10^6$ organisms. There are many commercially available biological indicators with a choice of spore ampoules or spore strips with growth media.

See UNC Asheville Autoclave Procedure

Incineration

Animal carcasses and animal parts and Sharps must never be disposed of in the general waste stream. These waste streams are incinerated. Contact UNC Asheville EH&S for disposal.

Treatment of Liquid Wastes

Liquid wastes must not be disposed of as solid waste. Liquid waste must be treated prior to disposal in the sewer system. Small amounts of these fluids can be treated by the addition of chlorine bleach to equal a final concentration of 10% bleach. The solution must "sit for at least 20 minutes" prior to disposal in the sewer. Alternatively, one could autoclave the fluid and dispose of it to the sewer. Prior to disposing of these wastes in 10 liter or greater volumes, contact UNC Asheville Environmental Health and Safety.