

Sharps and Biohazardous Waste Procedures

All generators of biohazardous waste must strictly adhere to the following Iowa State University waste disposal guidelines.

Biohazardous waste is defined as: All biologically contaminated waste that could potentially cause harm to humans, domestic or wild animals or plants. Examples include human and animal blood, tissues, and certain body fluids, recombinant or synthetic nucleic acid molecules, and human, animal or plant pathogens.

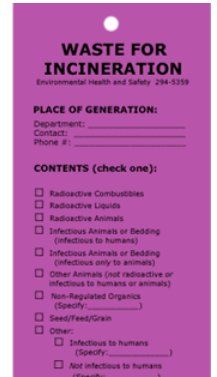
How to handle biohazardous waste: All biohazardous waste must be decontaminated before disposal. Common decontamination methods include heat sterilization (e.g., autoclaving), chemical disinfection, and incineration.

A. Animal carcasses (Transgenic animals or animals infected with *human* pathogens), tissues, bedding

1. Collect all transgenic animal carcasses or animal carcasses, tissues, and bedding, infected with *human* pathogens, in leak-proof biohazard bags or containers lined with a thick trash bag. Label with a "Waste for Incineration" tag. Take to the incinerator at 1676 Veterinary Medicine for incineration or have picked up for transport to an approved incinerator.

B. Liquids

1. Decontaminate all liquid biohazardous materials (such as human blood, bacterial cultures in liquid media, body fluids of animals experimentally infected with pathogens, etc.) by autoclaving or treatment with an appropriate chemical disinfectant for the sufficient contact time.
2. *After* decontamination, liquids may be disposed of by pouring them down the drain to the sanitary sewer.



Example of "Waste for Incineration" tag

DO NOT PUT ANY LIQUIDS IN REGULAR TRASH OR DUMPSTERS

C. Disposable solid items (*non*-sharps, and not animal carcasses, tissues or bedding)

1. Collect all *non*-sharp disposable items (such as gloves, plastic-ware, Kimwipes, etc.) contaminated with biohazardous materials in leak-proof autoclavable biohazard bags (red or orange bag with universal biohazard symbol or other bag tagged with red or orange universal biohazard symbol). Before decontaminating, place an autoclave indicator tape "X" over the biohazard symbol. Decontaminate the bags by autoclaving for a minimum of 45 minutes before disposal.

Examples



Biohazard bags



Biohazard symbol with "X"

2. **After** autoclaving, place the now decontaminated biohazard bag into a dark garbage bag, seal, and place in regular trash.

D. Non-disposable or reusable items

1. Decontaminate non-disposable or reusable items (such as equipment, glassware, bench tops, etc.) contaminated with biohazardous materials by using a chemical disinfectant (such as 10% bleach, a quaternary ammonium compound, an alcohol, etc.). Choose a chemical disinfectant appropriate for the specific biohazardous material being used and allow for sufficient contact time.

E. Metal Sharps

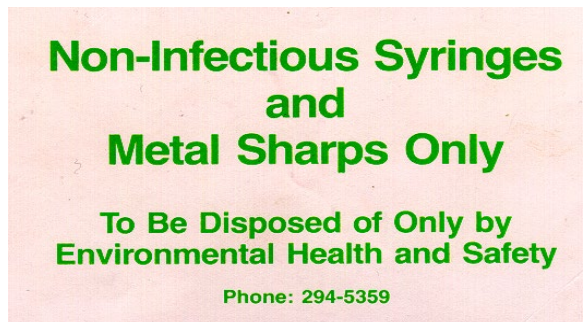
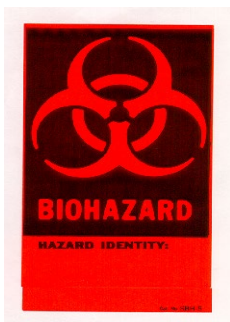
1. Use separate containers for metal, glass, and plastic sharps. Collect all metal sharps (such as hypodermic needles, surgical needles, scalpel blades, razor blades, etc.) contaminated with biohazardous materials in leak-proof, puncture resistant containers which have been labeled with the universal biohazard symbol. Decontaminate the containers by autoclaving.
NOTE: To prevent needle sticks, do NOT recap the needles or remove from syringes, instead discard the entire unit into the sharps waste container designated for biohazardous sharps.
2. After autoclaving, label the now decontaminated sharps waste containers with a "Non-Infectious Syringes and Metal Sharps Only" label.
3. Collect metal sharps that have never been contaminated with biohazardous materials (e.g., used only with chemicals) in leak-proof, puncture resistant white plastic containers labeled with a "Non-Infectious Syringes and Metal Sharps Only" label. Do not autoclave these containers, because they will melt.
4. To dispose of metal sharps, submit a [Waste Removal](#) request. Call Ames Laboratory ESH at (515) 294-2153 for Ames Laboratory pick up. EH&S will only pick up metal sharps waste that has been decontaminated.

DO NOT RE-USE SHARPS WASTE CONTAINERS.

DO NOT PUT ANY METAL SHARPS WASTE IN REGULAR TRASH OR DUMPSTERS.

NOTE Sharps containers and labels are available at Central Stores.

Label examples



F. Glass Sharps

1. Use separate containers for metal, glass, and plastic sharps. Collect all glass sharps (such as Pasteur pipets, broken glass, etc) contaminated with biohazardous materials in leakproof, puncture resistant containers which have been labeled with the universal biohazard symbol (see example above). Decontaminate the containers by autoclaving.
2. After autoclaving, empty the now decontaminated glass sharps container into a yellow tidy cat container in your laboratory for storage or into the yellow glass disposal bin on your building's loading dock for disposal. Call FP&M at (515) 294-5100 for removal when the bin is full.
3. Collect **glass** sharps that **have never been contaminated with biohazardous materials** (e.g., used only with chemicals) in a yellow tidy cat container in your laboratory for storage or into the yellow glass disposal bin on your building's loading dock for disposal. Autoclaving of these containers is not necessary. Call FP&M at (515) 294-5100 for removal when the bin is full.

G. Plastic Sharps

1. Use separate containers for metal, glass, and plastic sharps. Collect plastic materials (pipette tips, plastic pipettes) that can poke out of bags and contaminated with biohazardous materials in leak-proof, puncture resistant containers which have been labeled with the universal biohazard symbol (see example above). Decontaminate the containers by autoclaving.
2. After autoclaving, place the now decontaminated plastic sharps inside a garbage bag lined cardboard box, seal, label "Plastic Sharps" and throw into the regular trash dumpster.

DO NOT RE-USE SHARPS WASTE CONTAINERS

This procedure applies only to potentially biohazardous waste streams. Radioactive wastes and EPA regulated chemical wastes should continue to be handled as specified in the Iowa State University [Radiation Safety Manual](#) and the Iowa State University [Waste and Recycling Guidelines](#), respectively.

Contact EH&S at (515) 294-5359 or Ames Laboratory ESH&A at (515) 294-2153 with any questions or concerns regarding waste disposal.