

# EHS Laboratory Guidance

## Sharps and Pipette Tips Disposal

### Introduction

For our purposes, a “sharp” is defined as any object which could readily puncture or cut the skin of an individual, including, but not limited to:

- Needles, syringes, knives, razor blades, lancets, capillary tubes, metal shavings, etc. (Figure 1)
- Glass or plastic pipettes and pipette tips
- Any broken glass, glass slides, cover slips, plastic, metal, pottery with sharp edges, etc.
- Anything that could puncture through a garbage bag causing the bag to rupture and spill or risking injury and exposure to personnel.

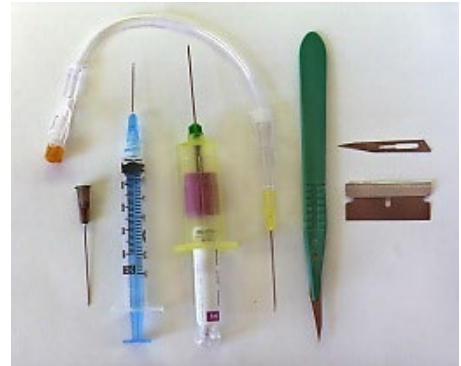


Figure 1

Although they are technically not “sharps,” disposable pipettes, tips, and other pointed disposable objects can perforate the plastic liner of a waste can and pose an unknown threat to personnel, especially if they are contaminated with laboratory chemicals or other materials.

Note that under the University of Idaho Bloodborne Pathogens Program, the definition of sharp applies only to items that have contacted human blood, human blood components, products made from human blood, or other potentially infectious material. Such contaminated sharps are considered “regulated waste.”

**Good laboratory work practices** help reduce hazardous exposures.

- Syringes, needles, razor blades, other sharps, and broken glass must be handled and stored carefully to avoid injury.
- Never pick up broken glass or other sharp objects by hand. Small pieces should be swept up using a broom and dustpan.
- Prevent sharps from falling into cup sinks in fume hoods and benchtops. If that happens, use gloves and tweezers to carefully remove them from the cup sink.
- Put reusable sharps away at the end of the work period. Place in appropriate containers and in a drawer or cabinet. DO NOT leave sharps on benches, in fume hoods, windowsills, or other “convenient” locations where other workers may be exposed.
- Use safety-engineered sharps (e.g. Luer lock syringes) or needle-less systems (Figure 2).



Figure 2

- Place sharps into appropriate sharps containers immediately after use. Do not place non-biohazard sharps into biohazard sharps containers.
- Do not shear or break contaminated needles or other contaminated sharps.
- Do not bend, recap, or remove contaminated sharps from devices.
- Do not reuse disposable sharps.
- Sharps containers must be stored near where the waste is generated and segregated from other waste.
- Sharps containers must not be filled greater than 2/3 full.

## Hazard Categories of Sharps

Proper disposal depends on the type of contamination and material construction. Sharps and pipette tips can be categorized as follows:

1. Non-hazardous items. Items that are not contaminated with any biological material, hazardous chemical or radioactive material. Some items can be disposed in the regular trash but must be packaged properly before disposal (see below).
2. Biologically contaminated items. This category includes regulated waste, as defined under the Bloodborne Pathogens Program, and items contaminated with biological material, recombinant DNA, or synthetic nucleic acid. In many cases, the sharps can be autoclaved or chemically deactivated and then disposed as non-hazardous waste.
3. Chemically contaminated items. Common chemical contaminants include chloroform and phenol.
4. Radiologically contaminated items.

## Collection Procedures

1. Non-hazardous items:
  - a. Glass: place non-hazardous glass in commercial glass disposal boxes lined with plastic, available from U of I ChemStores or laboratory supply companies. Boxes must be taped on the bottom or placed in a waterproof container on the floor. You can also place empty, unbroken chemical containers (one liter or less in size) in the box, as well as empty vials and test tubes. However, do not put any [acute hazardous waste](#) containers, even after rinsing, in the box.
  - b. Plastic and metal: place in 5-gallon plastic buckets provided by Environmental Health & Safety (EHS). These buckets come with a plastic liner and are pre-labeled.
2. Biologically contaminated items. Note: also refer to [U of I Institutional Biosafety Committee Policies and Procedures](#).
  - a. Place in hard-walled, puncture resistant, leak-proof, sealable container that is clearly labelled with the universal biohazard symbol.
 

Note: Sharps containers are single use containers and should not be emptied and reused.
  - b. Autoclave or incinerate, as indicated for the agent and specified in the lab-specific biosafety manual.
    - i. Prior to autoclaving, place an “x” in autoclave indicator tape over the universal biohazard symbol, or over the sharps label.
    - ii. After autoclaving, place biohazard container into a cardboard box, seal well with tape, and label box as “decontaminated sharps.”

- iii. Laboratory staff immediately dispose of properly labelled and well-sealed box in the standard waste stream (e.g. dumpster).
3. Chemically contaminated items.
  - a. Glass and plastic: collect in plastic containers provided by EHS. EHS can provide ½-gal, 1-gal and 5-gal plastic buckets. The containers are pre-labeled.
  - b. Metal: collect chemical-contaminated items in a separate container provided by EHS. Items will include razor blades, scalpels, lancets, syrettes, needles, and syringes with attached needles.
4. Radiologically contaminated items: refer to the [U of I Radiation Safety Manual](#) for proper procedure.

## Disposal Procedures

1. Non-hazardous items:
  - a. Glass: When full, tape the box lid and bottom shut with duct tape, place the box near the regular (municipal) trash container in the lab. It is the responsibility of the lab to remove and dispose of the containers in the dumpster. Please do not let full sharps boxes or containers sit in the lab. Contact EHS if help is needed for disposal.
  - b. Metal and plastic sharps: Do not overfill. Tape up the bucket and place in the nearest dumpster. Contact the EHS office at [safety@uidaho.edu](mailto:safety@uidaho.edu) to get a new bucket.
2. Biologically contaminated items: Follow [Biohazardous Waste and Sharps Disposal Procedure](#).
3. Chemically contaminated items:
  - Chemically contaminated sharps must not be autoclaved.
  - Submit a [Chemical Waste Collection Request](#) to EHS.
4. Radiologically contaminated items: Follow [Radiation Safety Manual](#) procedures.

