

Part I: Sharps and Laboratory Glass Disposal

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Needles, scalpel blades, and other sharps can seriously injure you and the people who handle your waste. This part describes requirements for disposal of wastes that can puncture skin, such as sharps and other hazardous laboratory glass. To prevent injuries, you need to keep waste types separate, contain sharps, use approved waste collection containers, and follow special disposal procedures. Additional precautions are necessary for sharps and hazardous laboratory glass contaminated with radioactive materials, hazardous chemicals, infectious agents, human blood, or as further described below.

A bulletin on Page 6I provides a summary of this Part.

SHARPS AND LABORATORY GLASS

Sharps and laboratory glass are comprised of three waste types, which determines the waste collection container required and method of disposal:

- A **Sharp** is an item that is designed to cut or puncture skin. Sharps include needles, syringes with needles, scalpel blades, lancets, and razor blades. According to State of Wisconsin law, broken vials and laboratory slides contaminated with infectious agents or human blood are also sharps. Sharps must be disposed of in an approved, puncture resistant sharps container.
- **Hazardous glass and plastic** are other laboratory items that may cause an injury if not contained. This waste type includes Pasteur pipettes, other pipettes, pipette tips, slides, coverslips and broken glass. These wastes must be disposed of separately in a suitable container.
- **Other glass and plastic** are unbroken items that are unlikely to cause an injury. This waste type includes unbroken petri dishes, microtiter plates, sturdy test tubes, and bottles that have been emptied of stock laboratory chemicals and reagents. They all may be disposed of in the normal trash. If broken, these wastes must be managed as hazardous glass and plastic.

Keep each of these waste types separate. Do not place sharps in a waste glass or plastic collection container.

This part's most important point: All needles must be disposed of in an OSHA approved sharps container.

RADIOACTIVE SHARPS AND GLASS DISPOSAL

Waste sharps and laboratory glass that contain radioactive materials must be disposed based on procedures established by UWL's Radiation Safety Officer. Conduct a web search for Radiation Safety Officer from UWL's homepage to identify contact information for this individual.

CHEMICAL SHARPS AND GLASS DISPOSAL

Chemically contaminated sharps should be placed in an approved sharps container (see below) and disposed of through Environmental Health and Safety according to procedure On-Site Service 1 in Part G of this Guide.

Prior to disposal, chemically contaminated laboratory glass should be emptied, drained of liquids, and as clean as possible. If contaminated with a hazardous chemical, labware can be decontaminated using procedure Labware 1 or Labware 2 in Part G of this Guide. Laboratory glass that cannot be easily decontaminated should be disposed of according to procedure Labware 3. Labware 1, 2 and 3 are on page 9G of this Guide.

BIOHAZARDOUS SHARPS AND GLASS DISPOSAL

Collect waste sharps and glass that are contaminated with infectious microbial agents, human blood, or body fluids in containers marked "Biohazard" and labeled with the International Biohazard Symbol. Prior to disposal, these wastes must be autoclaved. For guidance on autoclaving of biohazardous waste, refer to Appendix J of this Guide.

If autoclaving tape is not used, use a permanent marker to write "Autoclaved" on the sharps container. Then, dispose of the waste as uncontaminated sharps and laboratory glass, as described in the Sharps Disposal section of this Guide.

For laboratory glass, autoclaving is usually the simplest decontamination method, although an overnight soak in an appropriate disinfectant (e.g., a fresh 10% bleach solution) is satisfactory for unbroken glass and other non-sharp items.

SHARPS DISPOSAL

Sharps present a very serious risk to you, your colleagues, and others who handle your waste. Custodians, waste haulers and landfill operators have been injured from loose and improperly contained waste sharps. Because sharps are often used with hazardous materials and human blood, a sharps injury can also result in a harmful exposure and lead to a serious disease. Because contamination may not be apparent, waste sharps must be properly contained to minimize the risk of injury and exposure.

Sharps include needles, syringes with needles, scalpel blades, lancets, razor blades, contaminated broken vials, and contaminated laboratory slides

Use Approved Sharps Collection Containers

Wisconsin Department of Natural Resources law requires that waste sharps be collected in closable, puncture resistant and leak proof containers that meet Occupational Safety and Health Administration (OSHA) standards. Most laboratory supply vendors sell approved sharps collection containers in various

sizes. Containers with horizontal openings are preferred (i.e., mailbox type); needles tend to pyramid in containers that have smaller top openings.

All needles must be disposed of in puncture resistant containers.

Sharps collection containers must be labeled "Sharps." If the needles are contaminated with human blood or other biohazards, the container must also be labeled with the International Biohazard Symbol or be color-coded red.

Sharps Container Disposal

When filled, dispose of your sharps collection container as follows:

1. Seal the container to prevent spillage or protrusion of its contents. Tape may be necessary to secure the cap. Containers that will be autoclaved should not have their covers closed in a locked position. Autoclaving requires the container to be open to the atmosphere to allow steam to enter and prevent pressure differences inside the collection container.
2. Biohazardous sharps must first be autoclaved and should have autoclave tape placed on the container prior to autoclaving.
3. If autoclave tape is not used, after autoclaving use a permanent marker to write "Autoclaved" on the sharps container.
4. Contact Environmental Health and Safety to request disposal according to procedure On-Site Service 1 in Part G, page 29G, of this Guide.

Use Needles and Sharps Safely

In addition to proper disposal as described above, take the following precautions to prevent injuries from needles and other sharps. A needle stick injury is a serious laboratory risk, especially if the needle is contaminated.

- Place the sharps collection container as close as is feasible to the immediate area where sharps are used.
- Do not handle needles more than necessary: open, use and dispose of needles in one-step.
- Do not reuse needles or other sharps.
- Do not recap needles unless you use a specially designed recapping device that prevents injury or you use a one-handed technique.
- Whenever possible, do not remove the needle from the syringe barrel. Discard the empty syringe barrel and needle as one unit. Many needle sticks are caused by attempts to recap or remove syringe needles.
- Do not cut, shear or bend needles. This should not be done because studies show these practices result in needle sticks.
- Do not overfill collection containers. Dispose of collection containers as soon as they are filled. Overfilled containers tend to open when handled, or may force a needle through the container.
- Use caution when handling all sharps containers. The sharp, especially after/during autoclaving, can puncture through the container. Inspect every sharps container prior to picking it up.
- To prevent overfilling, replace sharps collection containers routinely.
- Keep the sharps collection container upright during use.
- Gloves, gauze, empty vials and other non-sharps should not be placed in sharps containers.

Take extra care if you use needles. Substitute needles with safer instruments; do not use needles for ordinary sampling or transfers unless necessary.

HAZARDOUS GLASS AND PLASTIC DISPOSAL

To prevent injuries to waste handlers, hazardous glass and plastic laboratory items must be disposed of separately in a suitable container. Keep hazardous glass and plastic separate from other wastes. Do not dispose of needles or other sharps in the same container as hazardous glass. All hazardous glass and plastic should be discarded in plastic buckets that are labeled “Hazardous Glass and Plastic.” If desired, cut out the Hazardous Glass and Plastic section of the poster in the last page of this section. Attach the cutout onto a bucket. Environmental Health and Safety has, and on request can provide more, labeled blue plastic buckets to assist with collection.

Do not overload the container. A large container filled with glass can be unwieldy and dangerous to handle.

Make sure the glass and plastic is as clean as possible. Empty the items of all hazardous chemicals and drain liquids; dispose of contents properly. See procedure Normal Trash 3 in Part G of this [Guide](#) if your labware is contaminated with hazardous chemicals. Biohazardous glass and plastic must first be autoclaved or chemically decontaminated.

Hazardous glass and plastic includes Pasteur pipettes, other pipettes, pipette tips, uncontaminated slides, coverslips, broken glass, and any fragile glassware.

Always use caution when handling broken glass. Do not pickup broken glass with your hands. Use forceps, tongs, broom and dustpan, or other tools to pickup broken glass. If broken glass must be picked up by hand, use cut resistant gloves.

Spray broken glass contaminated with bacteria or blood with a disinfectant. The broken glass should be sprayed repeatedly to keep wet for at least ten minutes. Alternatively, the broken glass can be placed in a pan or tray labeled as broken glassware and autoclaved. After the broken glassware has been disinfected or autoclaved, it can be discarded with other broken glass.

Removal harmful contamination from glassware prior to providing the glassware to Custodial Services for disposal.

Hazardous Glass Collection Container Disposal

Dispose of hazardous glass and plastic by placing the collection container next to the normal laboratory trash for the building custodial staff to discard. Alternately, dispose of the container on your own in the building trash dumpster.

Do not put needles and other sharps in glass disposal boxes.

OTHER GLASS AND PLASTIC DISPOSAL

Laboratory glass and plastic that is not easily broken can be disposed of directly in your wastebasket, although first placing these items in a cardboard box is preferred. Sturdy glass and plastic for the normal trash includes strong, small bottles, petri dishes and most test tubes and centrifuge tubes. Tape stacks of non-contaminated petri plates together to keep them from opening during waste handling.

Place larger empty glass bottles next to your wastebasket for disposal by the custodian. Be sure to keep them out of aisles and other foot traffic areas.

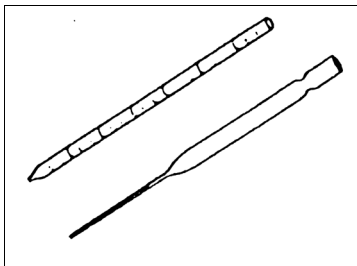
Most laboratory chemical bottles are sturdy and not easily broken. Fragile bottles and any broken items should be disposed of as hazardous glass and plastic, as described above.

Waste glass and plastic should be as clean as possible. Empty the items of all hazardous chemicals and drain liquids; dispose of contents properly. See procedures Normal Trash 1-4 in Part G of this Guide for disposal of items containing agar and other non-hazardous substances, wet wastes, contaminated labware, and empty chemical containers. All biohazardous glass and plastic must be decontaminated prior to disposal.

Think of others. Many people handle your waste. Package it carefully to avoid injuring them. No one likes to be exposed to wet or offensive waste.

Sharps and Hazardous Glass Disposal

HAZARDOUS GLASS AND PLASTIC

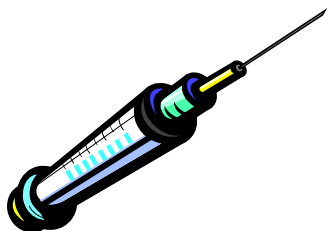


Hazardous Glass and Plastic that can injure: Pasteur pipettes, other pipettes, uncontaminated slides and cover-slips, broken or fragile glass

Disposal Procedure:

- If contaminated with infectious agents or human blood, decontaminate first.
- Empty the item of hazardous chemicals and drain liquids.
- Dispose of in plastic buckets that are labeled: "Hazardous Glass and Plastic". In an effort to standardize disposal containers, this section of the poster can be cutout and attached to a bucket.
- Place the labeled container next to the normal laboratory trash for the building custodian to empty. If desired, dispose of the container on your own in the building trash dumpster.
- If needed, contact Environmental Health and Safety for a labeled bucket.

NEEDLES AND OTHER SHARPS

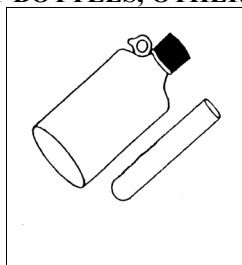


Sharps that can easily cut or puncture skin: Needles, syringes with needles, lancets, scalpels, razor blades, contaminated broken vials and laboratory slides

Disposal Procedure:

- Dispose of in OSHA approved sharps container. These containers are closable, puncture resistant, leak proof, and typically red or orange.
- Containers can be obtained from most laboratory supply vendor.
- If contaminated with infectious agents or blood, autoclave waste collection container.
- After decontamination, use a permanent marker to write "Autoclaved" on the container.
- Call Environmental Health and Safety to arrange for disposal.

EMPTY BOTTLES, OTHER GLASS AND PLASTIC



Other unbroken glass and plastic that is not fragile: Petri dishes, empty bottles, microtiter plates, and sturdy test/centrifuge tubes

Disposal Procedure:

- If contaminated with infectious agents or blood, autoclave prior to disposal.
- Empty the item of all hazardous chemicals and drain liquids.
- Place in waste collection container. Place larger empty bottles next to waste container.
- See Procedure Normal Trash 4 in Part G of the UWL Laboratory Safety and Chemical Disposal Guide for more information.

For disposal of chemicals and chemically contaminated sharps and glassware, see **Chemical Disposal Procedures in Part G** of the UW-L Laboratory Safety and Chemical Disposal Guide. For sharps and glassware contaminated with radioactive material and other radioactive waste, contact the UWL Radiation Safety Officer. For additional information contact UWL Environmental Health and Safety at 785-6800.

REVIEW QUESTIONS

1. Before disposing of a syringe:
 - a) Remove the needle.
 - b) Recap the needle.
 - c) Cut off or bend the needle.
 - d) None of the above.
2. A syringe with needle attached should be disposed of in:
 - a) A strong cardboard box.
 - b) A glass bottle.
 - c) A lined wastebasket.
 - d) A puncture resistant sharps container.
3. Important precautions for the safe disposal of broken glass include:
 - a) Placement in a container labeled "Hazardous Glass and Plastic."
 - b) Put in normal trash can.
 - c) Placement in a sharp container.
 - d) None of the above.

ANSWERS

1. d) Do not remove, cut or bend your syringe needles before disposal. Recap your syringe needles only if a specially designed recapping device is used.
2. d) A puncture resistant sharps container is the only safe way to contain needles, syringes with needles, razor blades, and scalpel blades for disposal.
3. a) It is important to place broken glass and other hazardous glass and plastic in puncture resistant and appropriately labeled “Hazardous Glass and Plastic” disposal containers.