

Standard Operating Procedure (SOP) for Safe Handling of Sharps

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Purpose:

This document describes the general guidelines for the safe use and disposal of sharps. The term “sharps” refers to any instrument that can puncture, cut or scrape body parts. Use of this term includes, but is not limited to, needles, syringes, sharp or broken glass, IV tubing with needles attached and suture needles, lancets, scalpel blades, glass Pasteur pipettes and glass capillary tubes, microtome blades and dental scalers. Use of sharps should be restricted to trained personnel and to those cases in which no alternative is available. Sharps additionally comprise a regulatory waste classification and must not be disposed of in the regular waste stream.

Safety Precautions:

The greatest risks when using sharps with recombinant DNA (rDNA) or with infectious or potentially infectious microorganisms are accidental injection and creation of aerosols. The most effective method of preventing cuts and sticks is to minimize contact with sharps by disposing of them immediately after use. The first step is to obtain an appropriate sharps disposal container. These containers are closable and puncture resistant on the sides and bottoms and are available in one quart, two gallon and eight-gallon sizes. These containers must be easily accessible to personnel; they should be labeled and placed as close as possible to the work area in which sharps are used.

Risks:

The potential safety risks for the sharps users are:

- Puncturing, cutting or scraping
- Exposure to contamination (infectious microorganisms or rDNA) from used sharps via puncture, cut or scrape
- Exposure to contamination from creation of aerosols

Proper PPE:

Personal protective clothing and equipment must be worn when using sharps:

- The PPE to be worn when working with sharps should be commensurate with the highest risk or hazard designation for any single biological agent, material or chemical used in the procedure, including recombinant DNA (rDNA)
- Puncture-resistant gloves or gauntlets should be used when possible
- Eye and respiratory protection should be used whenever the creation of aerosols is possible

Procedure:

Laboratory Glass

- Uncontaminated broken laboratory glass must be placed into a [closable, puncture-resistant container](#) labeled “Broken Glass” prior to disposal in the regular waste.
- Broken glass receptacles can be delivered free of charge by [submitting a work request](#). Boxes are delivered on Tuesdays and Thursdays.

- When the receptacle is 4/5 full, remove the lid, close the liner, replace the lid, seal with packing tape or duct tape and label with lab number and PI name. It is important to properly secure the receptacle in order to avoid endangering other personnel.
- The box can then be placed in the hallway for pickup by the custodial staff.
- Glass Pasteur pipettes and glass capillary tubes may be discarded with uncontaminated broken laboratory glass as described above. In this case, if the pipettes were used with biohazardous materials, they must be autoclaved first. If used with chemicals, the pipettes must be empty (which includes those pipettes with only minimal surface contamination).
- Any laboratory materials, including sharps, used with radioactive material *may not* be disposed as “Laboratory Glass” but must be managed with other [radioactive waste](#).

Handling Laboratory Sharps

Working with laboratory sharps is a significant hazard that needs to be reviewed and included during the risk assessment process for minimizing laboratory personnel exposure. Two of the major risks when using sharps are accidental injection and the creation of aerosols. Needles and syringes should only be used when there is no reasonable alternative. If there is no feasible alternative to recapping, bending, or removal of non-disposable needles, a mechanical device or one-handed technique must be used. It is feasible to recap using the one-handed “scoop” technique: use the needle itself to pick up the cap and push the cap and sharp together against a hard surface to ensure a tight fit. It is also possible to hold the cap with tongs or forceps to place it on the non-disposable needle. Also, air bubbles and the creation of aerosols should be minimized when filling a syringe. Work that may create biohazardous aerosols must be performed in a certified biological safety cabinet whenever possible.

- Never bend, shear, break, or recap disposable needles or remove from disposable syringes.
- Immediately following use, place the item into the sharps disposal container.
- Never reach into the sharps disposal container.
- Never empty the contents of the sharps disposal container into another container.
- Never remove the lid from the container.
- Never overfill a sharps disposal container; no materials should be sticking out the top.
- Never force materials into a sharps disposal container.

Storage of Laboratory Sharps

It is required that different kinds of used sharps be kept segregated by their type of contamination. Prior to disposal, contaminated laboratory sharps must be deposited in an authorized sharps container that indicates the kind(s) of sharp contamination present. Sharps disposal containers are red in color and equipped with a tight-fitting lid for use during handling and transport. Biohazardous contaminated sharps must be labeled with an International Biohazard Symbol. Read the authorized sharps container manufacturer’s instructions and recommended user training information prior to use. Approved sharps containers are available for purchase at Medical Stores.

Disposal of Laboratory Sharps

All sharps must be disposed of in authorized sharps containers indicating kind(s) of sharp waste contamination present. Once biohazardous sharps containers are 2/3 full they must be closed and sealed and disposed of in an approved [biohazard waste](#) box. *Laboratory sharps cannot be placed with regular trash.* Care must be taken to follow these procedures to prevent serious injury and violation of regulations.

Contact Information**Environmental Health & Safety Office**

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