

EH&S FACT SHEET

Environment, Health and Safety Information for the Berkeley Campus

Sharps: Handling and Disposal

What are sharps?

Sharps require special handling, storage, and disposal procedures. These procedures are critical to protect laboratory users and waste handlers from illness and injury, and to comply with local, state, and federal regulations. Improper management of sharps can result in both civil and criminal penalties for the individuals directly responsible, and for the campus.

Sharps are objects that can be reasonably anticipated to penetrate the skin or any other part of the body because they have acute rigid corners, edges, or projections capable of cutting or piercing. Sharps include, but are not limited to, the following:

- **Hypodermic needles**
- **Scalpels**
- **Razor and X-acto® blades**
- **Syringes contaminated with a biohazard**
- **Glass (broken or intact)**

Some of the items above are covered by state regulations for sharps; others are handled as sharps on the Berkeley campus for safety reasons. Contact EH&S if you are not sure if a material is a sharp. Note that plastic items including pipets, pipet tips, and non-biohazardous syringes without needles can be managed as sharps, as described in this fact sheet. Alternatively, place in thick (at least 4 mil) plastic bags or bottles; see the EH&S publication, "Quick Reference Guide for Managing Sharps and Pipets" for specific guidelines.

For disposal purposes, sharps are divided into four categories:

- **Uncontaminated**
- **Biohazardous**
- **Chemically contaminated**
- **Radioactive**

Segregating used sharps by their type of contamination is required by law, and makes disposal simpler and less expensive. If you have sharps with more than one type of contamination, see **Mixed Contamination** at the end of this fact sheet for proper procedures. If you are unsure if a chemical contaminant is considered hazardous for purposes of disposal, contact EH&S for additional guidance.



Handling sharps safely

Dos:

- Use a high degree of precaution with any sharp.
- When possible, substitute plastic ware for glassware.
- Use syringes with Luer locks or syringe-needle units (i.e., needle is integral to the syringe) to inject or aspirate hazardous materials.
- When possible, use needle-less systems, syringes that re-sheath the needle, and other safety devices.
- Place contaminated sharps into sharps containers immediately after use.
- Keep sharps containers
 - located as close as possible to where sharps are used or found,
 - easily accessible to personnel,
 - upright, where feasible, and
 - free of protruding sharps.

Don'ts:

- Do not use your hands to pick up sharps that may be contaminated. Use mechanical means such as a brush and dustpan, tongs, or forceps.
- Do not shear or break contaminated needles or other contaminated sharps.
- Do not bend, recap, or remove contaminated sharps from devices unless
 - you can demonstrate that no alternative is feasible, or that such action is required by a specific procedure, and
 - you can perform the procedure using a mechanical device or a one-handed technique.
- Do not reuse disposable sharps.
- Do not use needles, syringes, or other sharp instruments when working with hazardous materials, unless there is no alternative.
- For sharps containers:
 - Do not open, empty, put your hand(s) into, or access sharps containers in any manner that risks injury.
 - Do not try to access the contents of sharps containers.

Disposing of sharps

Sharps Containers

Dry, uncontaminated glass and some empty chemical glass containers can be placed in a rigid cardboard box for disposal as trash. See the EH&S fact sheet, "Empty Container Disposal and Recycling," and **Uncontaminated Sharps**, below, for more information.

All other sharps must be disposed of in an appropriate sharps container—i.e., a closeable, rigid, puncture-resistant container that is leakproof on the sides and bottom. When sealed, a sharps container is leak resistant and cannot be reopened without great difficulty. Sharps containers can be purchased from campus storehouses, vendors such as Fisher Scientific or VWR Scientific Products, or at drugstores.

See the following sections for instructions on proper labeling and disposal of each type of contaminated sharp.





Uncontaminated Sharps

Uncontaminated sharps are sharps that are free of biohazardous, hazardous chemical, and radioactive contamination. Some empty chemical glass containers can also be considered “uncontaminated” for disposal purposes (see the EH&S fact sheet, “Empty Container Disposal and Recycling”). For the protection of custodial and laboratory workers, and to reduce public concern, uncontaminated sharps must be disposed of in the manner outlined in this section.

Place uncontaminated broken and intact glass in a sturdy container or heavy, corrugated cardboard box that can be sealed. When the container or box is full, seal it with strong tape and label it “Uncontaminated Glass.” Mark the box “For Removal.” The custodial staff will pick it up, or you may put it into a trash dumpster.

Place uncontaminated sharps other than glass, such as needles and blades, in a sharps container and label it “Uncontaminated Sharps.” Deface or remove any existing hazard labels. Before sharps containers are full, tightly lid them or tape closed. Take them to one of the approved medical waste pickup locations below, and deposit them in a secondary medical waste container.

Biohazardous Sharps

Biohazardous sharps are sharps that are contaminated with biohazardous materials only, and are disposed of as medical waste. Place biohazardous sharps in a sharps container (preferably red in color) labeled “Sharps Waste” and with the international biohazard symbol as shown at left and the word “BIOHAZARD.”



BIOHAZARD

Before biohazardous sharps containers are full, tightly lid them or tape closed. Label the sharps container with the building and room number of the generating laboratory. Prior to the end of the day, take the containers to one of the approved medical waste pickup locations below and deposit them into a secondary medical waste container.

Medical Waste Pickup Locations

Use the pickup location in your building. (For access, contact your department building coordinator.) If your building is not listed below, call EH&S.

- Barker Hall, Room 2
- LSA, Rooms 161 and 638
- Morgan Hall, Room 314
- Mulford Hall, Room 330
- NAF, Room 205E
- Warren Hall, Room 155

Check the EH&S website for updated locations:

<http://ehs.berkeley.edu/whatwedo/hazmat/medwaste.html>.

For more information, see your Biological Use Authorization (BUA) or the EH&S fact sheet, "Guidelines for Managing and Disposing of Medical Waste," or call EH&S at 642-3073.



Chemically Contaminated Sharps

Chemically contaminated sharps are sharps that are contaminated with hazardous chemicals only. Place chemically contaminated sharps in a sharps container (preferably in a color other than red) or similar, rigid container. Deface or remove any existing biohazard labels. Label container with the hazardous chemical contaminants using proper chemical names.

Note: Do not put broken mercury thermometers in a sharps container. Tape over the sharp edges and place in a zip-locking plastic bag (or double-bag in clear plastic bags) to prevent the mercury from being released.

Before chemically contaminated sharps containers are full, tightly lid them or tape closed. Do not deposit chemically contaminated sharps in a medical waste pickup location. Manage chemically contaminated sharps as unwanted hazardous chemicals and complete a Materials Packing List (MPL). Refer to the EH&S fact sheet, "Unwanted Hazardous Chemicals."

Radioactive Sharps

Radioactive sharps are sharps that are contaminated with radioactive materials only. Place radioactive sharps in a sharps container (preferably in a color other than red) and label the container with the symbol shown at left and the words "CAUTION RADIOACTIVE MATERIAL." Deface or remove any existing biohazard labels. Provide the isotope(s), activity, date, laboratory location, Radiation Use Authorization (RUA) number, and Principal Investigator. As with all radioactive materials, ensure that isotopes are segregated from one another.



CAUTION
RADIOACTIVE
MATERIAL

Before radioactive sharps containers are full, tightly lid them or tape closed. Place the container in a clear plastic bag. If there is a radioactive waste Central Pickup Unit (CPU) in your building, deposit the sharps container into a dry waste drum. Log the isotope on the drum log sheet. If your building does not have a CPU, combine the sharps container with your radioactive dry waste and call EH&S for a pickup.

For more information on disposing of radioactive sharps, refer to the Radioactive Waste Guidelines in the Radiation Safety Logbook, Section K.

See <http://ehs.berkeley.edu/whatwedo/hazmat/sectkr.html>

Mixed Contamination

Disposal is less expensive if sharps waste is limited to one type of contamination. The law requires that sharps always be segregated by their type of contamination after use.



If sharps do become contaminated with a mixture of hazardous components during use, treat them as follows.

Biohazardous and hazardous chemicals

Limited quantities of some hazardous chemicals can be accepted as medical waste. For more information, refer to the Biological Use Authorization (BUA) for your laboratory or contact EH&S. Most sharps contaminated with both biohazardous and chemical contaminants must be managed as described below.

Select a chemical disinfectant that is compatible with the existing chemical contaminants and chemically disinfect the biohazardous component. Call EH&S if you need help selecting a chemical disinfectant. Manage sharps as unwanted hazardous chemicals. See the EH&S fact sheet, "Unwanted Hazardous Chemicals."

Biohazardous and radioactive

Select a chemical disinfectant that is compatible with the existing chemical contaminants and chemically disinfect the biohazardous component. Call EH&S if you need help selecting a chemical disinfectant. Label radioactive material and manage as radioactive sharps. See Section K of the Radiation Safety Logbook.

Biohazardous, radioactive, and hazardous chemicals

Select a chemical disinfectant that is compatible with the existing chemical contaminants and chemically disinfect the biohazardous component. Call EH&S if you need help selecting a chemical disinfectant. Label radioactive material, identify chemical contaminants, and manage as radioactive sharps. See Section K of the Radiation Safety Log Book.

Radioactive and hazardous chemicals

Label radioactive material and identify the chemical contaminants. Manage as radioactive sharps. See Section K of the Radiation Safety Log Book.

For more
information

If you have questions about whether your material is a sharp, or how to handle or dispose of it, contact EH&S at 642-3073. EH&S can provide copies of any of the publications mentioned here, or a complete listing of information resources. EH&S also has videos available for checkout. All of this information, including an online checkout service for videos, is available on the EH&S website at: <http://ehs.berkeley.edu>.