

HELP SHEET

No. 1

ENVIRONMENT, HEALTH & SAFETY PROCEDURES AND GUIDELINES FOR
THE BERKELEY CAMPUS



Managing and Disposing of Medical Waste



1. Introduction

The Office of Environment, Health & Safety (EH&S) has prepared these guidelines to assist the campus community in safely and legally managing medical waste. Federal, state, and local laws and regulations govern how medical waste must be managed.

The Committee on Laboratory and Environmental Biosafety (CLEB) has reviewed and approved these guidelines. EH&S will revise these guidelines whenever there are significant changes in medical waste regulations or medical waste management safety concerns. Contact EH&S at 642-3073 if you have any questions regarding medical waste management.

2. Do These Guidelines Apply to You?

These guidelines apply to anyone who generates medical waste or manages a medical waste pick-up location.

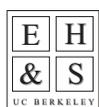
- Those who generate medical waste should become familiar with all sections of these guidelines.
- Those who are responsible only for managing a medical waste pick-up location should be familiar with Sections 7, 8, and 9.

3. Definition of Medical Waste

The following medical waste definition was written to help you understand what materials should be managed under these guidelines.

Medical Waste is:

- **Biohazardous Waste**—waste (including animal carcasses) contaminated with infectious agents known to cause human illness and not contaminated with radioactive materials or hazardous chemicals.
- **Biohazardous Sharps Waste**—devices capable of cutting or piercing that are contaminated with biohazardous waste. Examples include contaminated hypodermic needles, scalpels, razor blades, and X-acto® blades.



- **Pathology Waste**—recognizable human anatomical parts and fixed human surgery specimens and tissues.
- **Chemotherapy Waste**—waste such as gloves, towels, empty bags, and intravenous tubing that contains or is contaminated with chemotherapeutic agents.

Non-Medical Waste that is managed as medical waste at UC Berkeley includes:

- **Non-Medical Sharps Waste**—devices capable of cutting or piercing that are not contaminated with radioactive, chemical, or biohazardous waste. Handle the same as biohazardous sharps.
- **Animal Carcasses** not contaminated with infectious agents known to cause human illness—handle in the same manner as biohazardous waste.

This conservative method of management is necessary to protect custodial workers and to reduce public concern. The additional cost to manage these wastes as “medical waste” is minimal.

Medical Waste does not include:

- **Radioactive Waste** or mixtures that contain radioactive components—see Section K, *Radiation Safety Logbook*.
- **Chemical Waste** or mixtures of chemical and medical waste—see the EH&S Help Sheet, *Unwanted Hazardous Waste*.
- **Biotechnology Waste**, which is not a medical, chemical, or radioactive waste, but has the appearance of a laboratory waste; examples of biotechnology wastes include plant bacteria and viruses and cultures used in food production—use white autoclavable bags labeled “Non-Medical Waste,” steam sterilize, and dispose of in regular trash.
- **Broken Glass** not contaminated with biohazardous, chemical, or radioactive waste—package in a sturdy cardboard box, tape closed, label as “Broken Glass,” and dispose of in regular trash.

4. Segregating Medical Waste in a Laboratory

Segregating your wastes at the point of generation is one of the most important steps in properly managing your wastes. Following these rules will help to ensure you are not producing undesirable mixtures that may be difficult or expensive to get rid of.

- Whenever possible, do not combine medical waste with hazardous chemicals or radioactive waste.
- Separate sharps waste from other medical wastes.
- Separate pathology wastes from other medical wastes.
- Separate chemotherapy wastes from other medical wastes.

If different types of waste are mixed, treat these mixtures as follows:

- Mixtures of medical and radioactive waste—decontaminate the biohazardous component and manage as radioactive waste. See Section K, *Radiation Safety Logbook*.
- Mixtures of medical and hazardous chemical waste—if safe to do so, decontaminate the biohazardous component and manage as chemical waste. See the EH&S Help Sheet, *Unwanted Hazardous Waste*.

- Mixtures of medical, radioactive, and hazardous chemical waste—if safe to do so, decontaminate the biohazardous component and manage as radioactive waste. See Section K, Radiation Safety Logbook.

5. Properly Containing Medical Waste in a Laboratory

As with all laboratory waste, medical waste must be placed in a properly labeled container as soon as it is generated. Remember that the waste you generate will be handled by other individuals, such as building custodians, EH&S staff, and UC Berkeley’s medical waste contractor. Follow these steps to safely and legally contain your medical wastes.

Sharps Waste

- Place sharps waste in puncture-resistant containers labeled with the words “Sharps Waste” or with the international biohazard symbol and the word “Biohazard.”
- Keep sharps containers upright and place them near your work area.
- Do not overfill sharps containers.
- Tape sharps containers closed when they are full.

For more information on sharps, see EH&S’s Help Sheet “Handling and Disposing of Sharps.”

Biohazardous Waste

- Place biohazardous waste in red biohazard bags labeled with the words “Biohazardous Waste” or with the international biohazard symbol and the word “Biohazard.”
- Do not use orange bags, even if they are labeled for biohazardous waste.
- Place biohazard bags, even if they contain only a small amount of biohazardous waste, in a proper secondary container.

Secondary containers must be:

- rigid
- leak-resistant
- equipped with a tight-fitting cover
- kept clean and in good repair (see Section 8 below)
- labeled with the words “Biohazardous Waste” or with the international biohazard symbol and the word “Biohazard” on the lid and on the sides of the container.
- Keep secondary containers closed unless waste is being added to the bag.
- Do not use cloth hampers or wire racks as secondary containers.
- Contact EH&S to obtain specially labeled containers for pathology or chemotherapy waste.

6. Drain-Disposable Medical Waste

Some liquid medical wastes, such as human blood, may be disposed of in a laboratory sink if the waste is first autoclaved or brought to a final concentration of 1 percent bleach. The following medical wastes may *not* be drain disposed even if they have been treated with bleach or autoclaved:

- Human or animal cultures suspected of containing infectious agents
- Cultures and stocks of infectious agents

- Wastes from the production of infectious bacteria, viruses, spores, discarded live and attenuated vaccines

For more information on what may be eligible for drain disposal, refer to “Interim Guidelines for Drain Disposal of Chemicals.”

7. Medical Waste Pick-up

To ensure your medical waste is picked up, it must be brought to one of the designated pick-up locations listed below and placed in a container provided by our contractor. You may hand-carry full sharps containers (they should be taped closed). Biohazardous waste must be transported in an outer secondary container, labeled as described above in Section 5.

It is good laboratory practice and recommended by CLEB to autoclave medical waste before bringing it to a medical waste pick-up location. This reduces the hazard of the waste while it is accumulating on campus.

At the pick-up location, make sure containers are lined with a red biohazard bag even if only sharps waste is to be deposited inside. You may need to bring along an extra bag as a liner. Close the container securely after you deposit your waste. Sharps waste may be put in the same container as other biohazardous waste. Designated pick-up locations must be adequately secured to prevent animals or unauthorized individuals from coming in contact with the waste.

Medical Waste Pick-Up Locations

- | | |
|------------------------------|---------------------------|
| • Barker Hall, Room 16 | • NAF, Room 205E |
| • LSA, Rooms 161, 638 | • Stanley Hall, Room 123A |
| • Minor Hall, Rooms 586, 688 | • Tang Center, West Shed |
| • Morgan Hall, Room 314 | • Warren Hall, Room 155 |
| • Mulford Hall, Room 330 | • Wellman Hall, Room 413 |

Use the pick-up location closest to the point of generation.

8. Decontaminating Medical Waste Containers

The law requires that all secondary medical waste containers be kept clean and in good repair. These include laboratory and contractor-supplied containers at pick-up locations. Before cleaning, ensure that containers are free from encrusted material. Clean containers by one of these approved methods:

- Expose to hot water of at least 82 degrees Celsius (180 degrees Fahrenheit) for a minimum of 15 seconds.
- Sanitize by rinsing with or immersing in a one-percent solution of household bleach or a quaternary ammonium solution (400 ppm active agent). The following brands of quaternary ammonium solutions are safe for drain disposal at this concentration: Calgon Process NPD® and Pharmacal Research Laboratories Quatricide®. Other solutions may also be effective and safe for drain disposal. Contact EH&S for further information.

9. Medical Waste Spills

Medical waste spills must be cleaned up immediately. Any spilled medical waste and all associated contaminated cleanup debris must be handled as medical waste. Any contaminated area must be decontaminated by one of the approved methods listed in Section 8. Contact EH&S at 642-3073 for assistance in cleaning up medical waste spills that you do not feel comfortable handling yourself.

10. Related Programs, Services, and Information

If you generate medical waste, you may also need to apply for a Biohazard Use Authorization or Bloodborne Pathogens Registration. Call the campus biosafety officer at EH&S at 643-6562 for more information.

Contact EH&S at 642-3073 for copies of any of the information resources mentioned in this Help Sheet. For access to all of EH&S's resources, including online check-out of health and safety videos, visit the EH&S web site at <http://www.ehs.berkeley.edu/>.