
SHARPS, GLASS AND TRASH

Questions and Answers

1. How do I determine what type of “sharps” waste needs special handling?

Before you can decide how to properly dispose of “sharps”, you must understand the differences in the regulatory definitions of *Sharps waste*, *Biohazardous waste* and *Medical waste*. **Do not assume** that your waste is not medical waste just because you are not working in a medical clinic. Read the definitions below carefully and if you still need assistance feel free to contact EH&S for help.

A. Sharps waste

Means any device having acute ridged corners, edges, or protuberances capable of cutting or piercing, including, but not limited to all of the following:

1. Hypodermic needles
2. Syringes (with or without the needle attached)
3. Blades
4. Broken glass



B. Biohazardous waste

Means any of the following:

1. Laboratory waste, including, but not limited to, all of the following:
 - a. Human or animal specimen cultures from medical and pathology laboratories.
 - b. Cultures and stocks of infectious agents from research laboratories. (Infectious agent - means a type of microorganism, bacteria, mold, parasite, or virus that normally causes, or significantly contributes to the cause of, increased morbidity or mortality of human beings.)
 - c. Waste from the production of:
 - i. bacteria,
 - ii. viruses,
 - iii. spores,
 - iv. discarded live and attenuated vaccines used in human health care or research,
 - v. discarded animal vaccines, including Brucellosis and contagious Ecthyma, and
 - vi. culture dishes and devices used to transfer, inoculate, and mix cultures.
2. Human surgery specimens or tissues removed at surgery or autopsy, which are suspected of being contaminated with infectious agents known to be contagious to humans.
3. Animal parts, tissues, fluids, or carcasses suspected of being contaminated with infectious agents known to be contagious to humans.
4. Waste that contains recognizable fluid blood, fluid blood products, containers or equipment containing blood that is fluid or blood from animals known to be infected with diseases which are highly communicable to humans.



C. Medical waste

Means a waste that meets the definition of both **Sharps waste** or **Biohazardous waste** (as identified above) AND is generated or produced as a result of any of the following actions:

1. Diagnosis, treatment, or immunization of human beings or **animals**.
2. **Research** pertaining to the diagnosis, treatment, or immunization of human beings or animals.
3. The production or **testing of medicinal preparations** made from living organisms and their products, including, but not limited to, serums, vaccines, antigens, and antitoxins.

2. What is the UCSC “Biohazardous Waste Sterilization Procedure”?

Biohazardous waste should be sterilized or otherwise rendered noninfectious prior to disposal. This must be done so using any of the following methods:

1. Autoclave using (as a minimum) standard operating procedures established for the sterilizers being used.
2. Chemical sterilization through the use of appropriate disinfectant e.g. bleach, quaternary ammonia compounds, glutaraldehyde.
Note: Autoclaving is the preferred method used at UCSC to treat biohazardous materials before disposal. Substitute sterilization techniques other than items 1 and 2 above require prior approval from EH&S.
3. Discharge into approved sewer system (liquids and semi-liquids only) after it has been rendered noninfectious.
Exception:
 - a. Biohazardous waste mixed with chemical waste may NOT be poured into the sewer.
 - b. Under most circumstances non-sharps waste that is potentially infectious, e.g. blood or other potentially infectious body fluids, may be disposed to the sewer without treatment
4. Disposal off-campus at a state-approved autoclave or incinerator. (UCSC contracts with private disposal companies to incinerate waste not treated on campus.)
5. Recognizable human anatomical remains must be cremated or interred.
6. Research animals containing infectious agents must be incinerated.

3. What is the UCSC “Medical Waste Sterilization Procedure”?

You must be authorized by EH&S to treat medical waste. Medical waste must be treated by autoclaving prior to disposal. Alternative sterilization techniques other than autoclaving require prior approval from EH&S. Medical waste sterilization procedures include:

1. Autoclave using (as a minimum) standard operating procedures established for the sterilizers being used.
2. Place a strip of autoclave tape, approximately 8-10 inches long, on each container.
3. Autoclave for at least 30 minutes at 121 degrees centigrade. Longer times may be needed on larger, denser loads.
4. Use a strip chart recorder for each run, label with the date, quantity autoclaved and your initials. *The strip serves as a record of treatment and must be kept for three years.*
5. Sharps containers must be picked up by EH&S. Sterilized bags of non-sharp medical waste may be disposed in the dumpster if it is obvious they have been sterilized.
6. Run monthly spore strips on the autoclave and have the temperature calibrated annually, *maintain these records with recorder strips for at least three years.*

4. Why can't I use the old red bags for disposing of my agar plates?

The use of red bags is specifically reserved for use with Medical Waste. Usually, biohazardous waste is somewhat less hazardous than medical waste so regulators have reserved the red bags to indicate Medical waste.

5. If I'm performing work at LML and inject a sea lion with deuterium for metabolism studies is that syringe medical waste? The syringe is visibly contaminated with the animal's blood.

No. If the syringe was not use to diagnose (medically speaking), treat, or immunize the animal then it is not medical waste. The syringe is considered a sharp and needs to be disposed of in a clear “Sharps Only” box and then given to EH&S when full.

6. **What if the sea lion in the example above was sick? Surely this would be considered medical waste?**

Nope – Only if the animal was known or suspected of being contaminated with infectious agents known to be contagious to humans would the syringe be considered medical waste. However, since the animal is sick, good practice dictates that you must dispose of the syringe in a clear sharps container labeled with the biohazard symbol.

7. **Why can't I discard uncontaminated plastic pipettes in the trash? After all it's plastic and can't cut anyone.**

Plastic pipettes look so similar to glass pipettes that it is almost impossible to tell them apart without touching them. Our custodial staff have been trained not to empty or dispose of any laboratory trash that has “glass” items in it. The plastic pipettes are often confused as being glass. This prevents the trash from being disposed creating problems for custodial staff, EH&S, and laboratory workers who get blamed for disposing of glass in the normal trash.

8. **What about the blue and yellow pipette man tips? Are they sharps waste?**

No. We believe that they do not meet the definition of sharps (capable of cutting or piercing). They can, however, easily puncture the side of a garbage bag so we recommend you double bag these prior to disposing.

9. **Why can't I dispose of uncontaminated reagent bottles, soda bottles or glass food containers in the regular trash? People in offices do it all the time.**

Again, the goal is to keep all glass out of the trash to prevent injury to custodial staff. Glass in the regular trash can easily get broken during handling creating a hazard. Recyclable glass like food and soda containers should be recycled. Intact empty reagent bottles must be directly placed into the dumpster after defacing the label.

10. **Why don't you recycle the glass in the glass boxes?**

Laboratory glassware is a different type of glass than what is commonly used in beverage containers. Lab glass (like Pyrex) is incompatible with the type of glass targeted for campus recycling operations. If you have a glass beverage container please take the time to recycle it in the recycling bins.

11. **Why can't I put reagent bottles in the campus recycling waste stream?**

It is true that some (but not all) reagent bottle glass is compatible with the recycling program. Regardless of the compatibility issues, the folks that do recycling must assume, for their own protection, chemical reagent bottles are contaminated. Anytime they find a reagent bottle in a recycle bin they need to contact EH&S to remove the container ensure safety. Please keep reagent bottles out of the recycled glass bins and waste stream.



12. Why do I have to tape up the glass boxes when they're full?

Although the Fisher Glass Only boxes look like they're designed to just fold and close, they don't function that way very well. Without tape the glass boxes can easily fall apart when the custodian transports them. Taping the boxes with a strong packaging tape (like boxing tape or duct tape – available at the stockroom) helps ensure the box stays safely intact for the trip to the dumpster.

13. What about wet glass?

Obviously, moisture destroys the integrity of the box so you need to be very careful not to put wet glass in the glass box. Custodians will only remove sealed, sturdy, intact containers with good integrity can be transported.

14. Why the change to the policy?

Since EH&S last issued a policy on glass or sharps the regulations have changed and regulatory interpretations have evolved. This new guidance is intended to eliminate some confusion on requirements and address concerns from the custodial staff. Please contact EH&S 459-2553 if you have questions or need assistance complying with these procedures.