University of Minnesota **|** Duluth

1. **Hazardous Waste Management**

**Laboratory Safety Plan/Compliance Manual**

## 7.1 Hazardous Waste Training

Training is required for any person who:

* handles, store and dispose of hazardous materials
* is responsible for the condition of containers used to store and transport hazardous materials
* prepares waste disposal form and package hazardous materials for transportation
* is responsible for the safety of hazardous materials

The training covers the following

* Use of University of Minnesota Hazardous Chemical Waste Management Program
* Hazardous waste determination
* Labeling of hazardous waste containers
* Completion of the waste packing forms
* Contacting the UMD Environmental Health and Safety Office (EHSO) for waste collection
* Closure of Containers
* Secondary containment for free liquid wastes
* Storage for incompatible wastes (separated by tray, cabinet, room, etc.)
* No hazardous waste allowed in trash or salvage dumpsters
* Who to call for hazardous waste information
* Who to call for approval to sewer non-hazardous chemicals
* Management of problem wastes (unknowns, shock-sensitive, etc.)
* Self auditing procedures

Training Courses can be found at <https://ehso.d.umn.edu/hazardous-waste/>

Additional information on wastes (special, biological, or radioactive) can also be found on this website.

For questions or in person training, contact: Andrew Kimball 726-6764

## 7.2 Broken Glass and Sharps Disposal

Broken glass and broken labware are never accepted for recycling and should never be placed in the regular trash.  It should instead be placed in the glass disposal box.

Glass Pasteur pipettes, capillary tubes, slides, coverslips, and small shards of broken glass are not recyclable and are always treated as infectious waste whether known to be contaminated or not.  These items should be processed as sharps and disposed of in an appropriate sharps container for pick-up.  Sharps containers must be clearly labeled with the biohazard symbol and/or the phrase “infectious waste.”  Do not overfill most sharps containers are designed to be filled only to ¾ capacity.  These items must not be autoclaved prior to disposal, even if known to be contaminated.  Sharps will be decontaminated off site.

Large pieces of broken glass are not accepted for recycling.  They should be placed in an appropriate glass disposal box with a plastic liner or in a plastic pail.  The lid must close completely and be taped shut.  The box/container must not exceed 50 pounds and be labeled as non-hazardous broken glass waste.  To ensure the weight limit is not exceeded, do not fill large bins beyond half full or only use small bins.

Large pieces of broken glass known to be contaminated with chemical or biological waste should not be placed in a bulk broken glass container.  Large pieces of contaminated glass must be packaged separately and labeled as to the appropriate hazard. Label as "Labware (or glassware) contaminated with \_\_\_\_\_\_" (state name).

Appropriately packaged broken glass and sharps containers will be picked up by Facilities Management or EHSO for further waste processing.

## 7.3 Non-Broken Glass Disposal

Unwanted non-broken, uncontaminated glassware or bottles that are still in usable condition may be offered to other labs/schools.  Non-broken, clean, glass storage containers may also be eligible for recycling or reuse.  Contact 218-726-6764 for details.

Non-broken glass containers contaminated with biological material or potentially infectious material should be autoclaved, then can be process as per regular non-broken glass waste.

For non-broken glassware or containers contaminated with acutely toxic substances or pesticides refer to next section.

## 7.4 Non-Broken Glass Containers Contaminated with Acutely Toxic Substances or Pesticides

Labware or empty bottles which originally contained pesticides or ingredients considered acutely toxic by the U.S. Environmental Protection Agency may be disposed of after triple rinsing (collect the rinsate).  Acutely toxic chemicals can be identified by and EPA# which begins with “P” listed in the Chemical Waste Registry.

Rinse items that contained pesticides, heavy metals (except mercury) or acutely toxic chemicals 3 times with 10% of the bottle volume of an appropriate solvent that can remove the chemical.  The rinsate must be collected as hazardous waste.

If toxic residue remains on glass or labware, contact EHSO at 726-6764 to determine the appropriate route of disposal.  It may be necessary to dispose of the labware as hazardous waste.  If this is the case, complete a waste packing form for the contaminated labware.  Label as “Labware contaminated with (enter name) residue.”  The containers with residue are not acceptable for recycling, but hey may be used to collect compatible hazardous waste.  The containers must be relabeled appropriately.

Mercury contaminated labware must be collected as hazardous waste.