

University of Idaho

CNR Laboratory Safety Requirements

Lab safety is a communal affair, but depends upon individual attentiveness and behavior. The following are emphasized:

1. You are responsible for knowing what you are doing, and the potential hazards of your laboratory activity. This means being knowledgeable about chemicals and reagents you are using, the instruments you employ, and how they are safely utilized. For all chemicals and reagents, there are Safety Data Sheets (SDS) available, which list the known hazards of chemical and biologically active substances, and recommended practices for safe use. At CNR general analytical Lab, SDS sheets are kept in the Blue Notebook, in room 218, adjacent to information board and main desk. It is incumbent upon everyone working in the Lab to be informed.
2. You are responsible for keeping the work environment clean and tidy, and minimize the risk to other users. You should nevertheless assume that all items you handle in the laboratory have been contaminated with something. Closely inspect equipment you are about to use and always wash hands prior to leaving the laboratory as minimal precaution.
3. You are responsible for the safety of others who may use the laboratory and its equipment. In addition to working in tidy fashion, this also means providing information so that others can work safely—any solution, container, package, etc., which is going to inhabit a common place, or be accessible to others in the laboratory must be adequately labeled with date received, date opened and to whom it belongs, so that others will be able to know its contents and how it should be handled.

Working safely in the laboratory is no great feat, it is a common sense—if you don't know whether something is potentially toxic or dangerous, don't mess with it until you find out. When working with potentially dangerous materials take appropriate precaution—protective clothing, safety goggles, gloves, and advice are all available, and their use is actively encouraged.

Items that warrant special attention:

General Chemical safety guidelines:

Acids and Bases. Segregate acids from bases and other incompatible materials. These need to be stored in designated locations, and kept separated. Acids and bases will react strongly with one another, and the consequences can be dangerous, hence, they need to be stored and used in a manner that prevents their mixing in the event of a spill. Always store large bottles of acids and bases on low shelves or on trays/basins in their designated cabinets marked “Corrosives”. Always use bottle carriers or cart to transport acids and bases bottles. If possible keep acid and base bottles in a plastic or glass basin to contain any drips or leaks.

In case of spill DO NOT USE BASES to NEUTRALIZE ACIDS and vice versa. Contact the laboratory manager if you have any questions about how to clean up a chemical spill.

Flammables. Always store flammables in a flammable room. Keep away from sources of ignition.

Acrylamide/polyacrylamide. Neurotoxins, effects are cumulative. Avoid skin contact, which means wearing gloves and lab coat when working with these substances.

Ethidium bromide. Carcinogen. Avoid skin contact, which means wearing gloves and lab coat when working with ethidium bromide.

Waste management:

There are many unique hazards associated with any waste that originates from a laboratory. Proper disposal of laboratory wastes is important for the health and safety of everyone in the CNR community and beyond. The following are basic guidelines;

Solid waste. This waste is not regulated for special disposal, therefore can be placed in a standard dumpster for disposal. Most of solid waste is removed from the laboratory by custodian. Examples of solid wastes include;

- a) Office waste-paper, plastics, and other non-contaminated trash.
- b) Glass waste- non contaminated broken or whole glass, glass or plastic pipettes, pipette tips. Glass waste should be placed in a sturdy, cardboard box with top, lined with a plastic bag. The box should be clearly marked "Broken Glass". Once the box is full, cover it and secure with tapes to ensure no leakage. Take it to the dumpster.
- c) Sharps- all needles, syringes, razor blades and other metal sharps, regardless of whether they are contaminated with biohazardous materials. Sharps waste must be placed in leak proof, clearly labelled containers. Once the container is full, secure it very well with tape and take it to the dumpster. Don't put it in the regular trash. Custodian will not collect it.
- d) Autoclaved biological material. After the material has been confirmed to be sterile, biohazard labels should be removed and the material should be placed in a sturdy bag and ensure no leakage. Take it to the dumpster.

Chemical wastes. Most chemical waste is regulated as hazardous waste. Collect all chemical waste close to the place of waste production using an appropriate container for the type of waste produced. The container must be clearly labeled with chemical name or constituents and percentage of each chemical in the container. The following should be adhered:

- a) The waste container should be closed when not in use.
- b) Each time when adding waste in a container, make sure you update the label.
- c) When ready for waste pickup, submit a chemical waste collection request by filling out online forms at EHS website- www.uidaho.edu/EHS. In case of problem call safety at 885-5969.

Note: If you don't know/not sure what to do with the wastes you have generated, don't pour it down the drain! Contact Laboratory Manager or Call EHS.

Biological wastes. To comply with university regulations regarding proper safe disposal of biological wastes;

- a) We freeze and retain carcasses and all fish or invertebrate body parts in bags. This waste is collected in the large chest freezer-labelled mort storage at CNR Wet Lab (located in CNR I 14). Contact Lab manager for properly dispose of this waste.
- b) Biological wastes produced in the laboratory that do not need to be destroyed (e.g., incineration) must be disinfected prior to disposal. Please follow these procedures;
 - i. Collect this waste into biohazard bags that has been placed into biohazardous waste containers.
 - ii. You must autoclave this waste before placing it into regular trash. This waste must have some indication on the bag that it has been autoclaved or sterilized.
 - iii. You are responsible for ensuring no leaking from this waste and it is required to take this waste to the dumpster located outside the building.