

EHS-17: Guide to Laboratory Sink/Sewer Disposal of Wastes

Laboratory drains on the University of North Alabama Campus are connected to the City of Florence's Publicly Owned Treatment Works (POTW), i.e. sanitary sewer. Therefore, we need to follow city codes as well as state and federal requirements. Material poured down drains ends up at the POTW. These guidelines were prepared in conjunction with the City of Florence POTW. Contact the Environmental, Health and Safety Dept. at X 4804 with questions.



ACCEPTABLE SUBSTANCES FOR DRAIN DISPOSAL

There are a limited number of substances acceptable for drain disposal, providing the solution does not contain material otherwise prohibited. These substances include:

- Chemicals that are water soluble and not hazardous by definition.
- Aqueous solutions:
 - such as salts or buffer solutions within the pH range of 5.0 to 11.5.
 - with a flashpoint greater than 140 F (60C).
 - containing alcohols at a concentration of 20% weight or less.
- Small quantities of acids or bases within the pH range of 5.0 to 11.5.
- Biological liquids that have been treated with disinfectant.
- Buffer solutions containing less than 10 µg/ml of ethidium bromide.



PROHIBITED DISCHARGE SUBSTANCES

The following substances and general categories of chemicals are prohibited from sink or drain disposal:

- Aqueous solutions containing Formalin
- Organic Solvents
- Brominated Hydrocarbons
- Chlorinated Hydrocarbons
- Chlorofluorocarbons
- Radioactive Materials
- Oil and Grease (petroleum, vegetable, mineral, wax, fats, etc.)
- Heavy Metals (Arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, etc.)
- Cyanides
- Solid or Viscous Waste
- Unused or 'Pure' Chemicals
- Hot Liquid or Vapor Waste
- Nuisance Chemicals (cause odors or discoloration)
- Ethidium Bromide or Acrylamide
- Hazardous wastes:
 - Ignitable
 - Corrosive
 - Reactive
 - Toxic
 - EPA-listed

See EHS-23, *Empty Chemical Containers*, for instructions on managing empty containers.

REFERENCES:

- Prudent Practices in the Laboratory: Handling and Disposal of Chemicals, National Academy Press, Washington, D.C., 1995.
- Safety in Academic Chemistry Laboratories, 8th Edition, American Chemical Society, 2017.