



## Can chemicals go down the drain?

The management of hazardous waste is regulated at the federal level by the United States Environmental Protection Agency (EPA) under the authority of the Resource Conservation and Recovery Act (RCRA). At the state level, the Pennsylvania Department of Environmental Resources (PADEP) also regulates the disposal of hazardous waste. These regulations are contained in 25 PA Code Chapter 262a.

In accordance with these regulations, “the indiscriminate drain-disposal of chemicals/materials” is prohibited. Inappropriate disposal of certain chemicals into the sanitary sewer system may create a variety of hazards including the following:

- Fire and/or explosion hazards within the drain system.
- Inadvertent mixing, within the drain system, of incompatible chemicals from different laboratories.
- Corrosion of drainpipes.
- Chemical exposure hazards to plumbers.
- Escape of volatile, toxic and/or malodorous substances.
- Biocidal action on microorganisms that are necessary for the normal and effective operation of our waste water treatment plant.
- Addition of unacceptable amounts of toxic substances (e.g., certain heavy metals) to our sewage sludge and effluent.

Although drain disposal of certain chemicals does pose the aforementioned hazards, Environmental Health and safety agrees with the following statement by the National Research Council’s Committee on Hazardous Substances:

*“Subject to local regulation, modest quantities of many common laboratory chemicals, including some that are listed as hazardous by the U.S. Environmental Protection Agency, can be safely and acceptably disposed of down the laboratory drain with proper precautions.”*

In an effort to reduce the volume of hazardous chemical waste that must be disposed of, **guidelines for drain disposal of <50% hydrochloric, phosphoric and sulfuric acids** have been developed:

1. Work in a chemical fume hood & wear personal protective equipment such as gloves and a lab coat.
2. Dilute acid with cold water to 1:10 (always add acid to water) **Please note that these guidelines only apply to the above listed, uncontaminated acids and not to mixtures with other materials such as mixtures with heavy metals, other toxic or flammable materials.**
3. Slowly add sodium carbonate or calcium carbonate until pH between 5 & 10
4. Allow solids to settle
5. Decant solution to drain with at least 50 times the volume of water
6. Allow solid to dry and package for disposal in normal trash

All other hazardous materials must be disposed of through EHS unless prior approval has been acquired.  
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