

HAZARDOUS LIQUID CHEMICAL WASTE FLOWCHART

Notes:

- compatibility
- liquid vials (empty liquid into appropriate stream as per chart)
- original containers (leave as is)
- if the waste isn't on this chart contact esf@uwaterloo.ca AFTER consultation with your PI.

Choose a starting Material

Solvents

Aqueous substances

Highly reactive materials

Caustics

Organic Solvent (< 20% water)

Halogenated organic solvent (< 20% water)

Examples include acetone, alcohols, hexane, THF, and acetonitrile.

Examples include perchloroethylene, methylene chloride

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Examples:

- 1.) Halogenated - groundwater contaminated with chloroform or solvent rinses
- 2.) Non-halogenated - groundwater contaminated with xylene or solvent rinses
- 3.) Metals - solutions contaminated with heavy metals
- 4.) Inorganic salts - ferric sulphate, sodium sulphate solutions
- 5.) Weak acid rinses

Use compatible bottle and label with list of compounds. Label should include "AQ" denoting an aqueous substance.

Note - examples 1 through 5 cannot be mixed together. As an example, water contaminated with halogenated compounds cannot be mixed with anything other than water and other halogenated compounds.

Acid

Base

Rules:

- 1.) Never mix inorganic acid and organic acid wastes
 - 2.) Never mix oxidizing acid wastes with any other wastes
 - 3.) Before mixing acid wastes, ensure you have a good reference for the process.
 - 4.) Labs must develop SOPs for the use, storage and disposal of:
 - aqua regia,
 - piranha solution,
 - hydrofluoric acid,
 - perchloric acid; and picric acid.
 - 5.) Waste should be placed in **plastic bottles**.
- Disposal includes neutralization processes when applicable.

Rules:

- 1.) Never mix any organic base wastes with inorganic base wastes
- 2.) Inorganic bases wastes or metal hydroxides wastes may be mixed with one another when compatible.
- 3.) Organic base wastes or amine wastes may be mixed with one another when compatible.
- 4.) Waste should be placed in **plastic bottles**

Pyrophorics and Water Reactives

Inorganic Peroxides

Organic Peroxides

DO NOT MIX! Package individually in inerting or stabilizing substances - SOPs are required for these substances that outline specific disposal, storage and packaging requirements.

Peroxides should not be mixed with other substances, Do not mix with other wastes, and determine properties before storing or transporting

Some organic peroxides are shock, light, and/or temperature sensitive. Do not mix with other wastes, and determine properties before storing or transporting