

From; Prudent Practices for Disposal of Chemicals from Laboratories.
(National Academy Press 1983)

Appendix K Guidelines for Disposal of Chemicals in the Sanitary Sewer System

The following lists comprise compounds that are suitable for disposal down the drain with excess water in quantities up to 100 gms at a time. However, local regulations may prohibit drain disposal of some and should be checked before any laboratory compiles its list of compounds acceptable for disposal down its drains. Compounds on both lists are water soluble to at least 3% and present low toxicity hazard. Those on the organic list are readily biodegradable.

I. ORGANIC CHEMICALS

ALCOHOLS

Alkanols with less than 5 carbon atoms

t-Amyl alcohol

Alkandiols with less than 8 carbon atoms

Glycerol

Sugars and sugar alcohols

Alkoxyalkanols with less than 7 carbon atoms

n-C₄H₉OCH₂CH₂OCH₂CH₂OH

2-Chlorethanol

ALDEHYDES

Aliphatic aldehydes with less than 5 carbon atoms

AMIDES

RCONH₂ and RCONHR with less than 7 carbon atoms

Aliphatic diamines with less than 7 carbon atoms

Benzylamine

Pyridine

CARBOXYLIC ACIDS

Alkanoic acids with less than 6 carbon atoms

(Those with disagreeable odors, such as dimethylamine, 1,4-butanediamine, butyric acids, and valeric acids, should be neutralized, and the resulting salt solutions flushed down the drain, diluted with at least 1000(1 thousand) volumes of water.)

Alkanedioic acids with less than 6 carbon atoms

Hydroxyalkanoic acids with less than 6 carbon atoms

Aminoalkanoic acids with less than 7 carbon atoms

Ammonium, sodium, and potassium salts of the above acid classes with less than 21 carbon atoms

Chloroalkanedioic acids with less than 4 carbon atoms

ESTERS

Esters with less than 5 carbon atoms

Isopropyl acetate

ETHERS

Tetrahydrofuran

Dioxolane

Dioxane

KETONES

Ketones with less than 6 carbon atoms

NITRILES

Acetonitrile

Propionitrile

SULFONIC ACIDS

Sodium or Potassium salts of most are acceptable.

II INORGANIC CHEMICALS

This list comprises water soluble compounds of low-toxic-hazard cations and low-toxic-hazard anions. Compounds of any of these ions that are strongly ACIDIC OR BASIC SHOULD BE NEUTRALIZED before disposal down the drain.

Cations	Anions
Al ³⁺	BO ₃ ³⁻ , B ₄ O ₇ ²⁻
Ca ²⁺	Br ⁻
Cu ²⁺	CO ₃ ²⁻
Fe ^{2+, 3+}	Cl ⁻
H ⁺	HSO ₃ ⁻
K ⁺	OCN ⁻
Li ⁺	OH ⁻
Mg ²⁺	I ⁻
Na ⁺	NO ₃ ⁻
NH ₄ ⁺	PO ₄ ³⁻
Sn ²⁺	SO ₄ ²⁻
Sr ²⁺	SCN ⁻
Ti ^{3+, 4+}	
Zn ²⁺	
Zr ²⁺	

More recent best practice guidelines (2007) add the rider;

Water-soluble organic compounds that are highly flammable or boil below 50° C should NOT be poured down the drain. Other compounds that shouldn't go down the drain include water-**insoluble** organic compounds (including all hydrocarbons and halogenated hydrocarbons); flammable or explosive solids, liquids, or gases; phenols and other **taste- or odor-producing** substances; wastes containing poisons in toxic concentrations; and corrosive wastes capable of damaging the sewer system.