Chemical Waste

Improper waste disposal can also lead to serious and frequently unexpected accidents.

- No chemical waste can be disposed of *via* the sewage system.
  - Exceptions are unused dilute aqueous sodium or potassium hydroxide buffers, unused aqueous hydrochloric or sulfuric acid buffers.
- Before adding waste to a chemical waste container, make sure that your chemicals are not incompatible and that reactive chemicals have been properly quenched. Combining incompatible waste or using an incompatible container could cause rupturing of containers and explosions.
- Chemical waste at the Technion is separated into three (3) principle classes:
  1. Organic solvents - All solvents and (in)organic chemicals. Most of the chemical waste generated in the laboratory can be added to this container. Never add oxidizers (such as hydrogen peroxide) to the organic waste. This could result in a fire or an explosion. Clearly indicate on the safety label which chemicals are present .
  2. Acids.
  3. Solids - Broken glass, vials and pipettes are collected in an appropriately labeled container; used needles are collected in another designated (red with a yellow opening lid) container.
  4. Oxidizers.
  5. Nitric acid and Piranha solutions are collected separately. These mixtures of acids produce strongly oxidizing solutions. Do not keep them in the hood for extended periods of time, as they will corrode the metal-framework in the fume hood. Never ever mix them with even trace amounts of organics as this can result in explosions. Use glass bottles for collecting the chemical waste. Do not mix these acids together. <u>Make sure the glass bottles do not contain residual organic materials</u>. Do not cap the bottles as their decomposition produces gaseous vapor, which could lead to an explosion. These bottles should be kept in or underneath the fume hood, properly labeled and covered with parafilm.
- Always think before disposing waste in a container! Caution should be given to peroxide forming chemicals (PFCs), as the can be highly explosive.