

Safe Glassware usage and disposal

- Pick the appropriate glassware for specific experiment.
 - Heat causes expansion of volatile materials. Confinement of expansion results in explosion.
 - Mixing sulfuric acid with water inside a cylinder causes an exothermic reaction to occur, resulting in the heat from the reaction to break the bottom of the vessel.
 - Hydrofluoric acid chemically attacks glass. Hot phosphoric acid and strong hot alkalis also attack glass. Never use glass to contain these processes.
- Always inspect glassware for flaws prior to usage. Scratches can turn to cracks.

Tips to safe handling of glassware

- Never carry a flask by its neck and never carry a beaker by its side.
- Use two hands to carry glassware.
- Proper glove should be worn in case of breakage, chemical contamination or thermal hazard.
- Avoid physical stresses to the glassware.
- Never heat or cool glassware unless it is designed for that purpose.
- Never set hot glassware on top of cold benchtop.

Disposal of glassware

- When disposing of broken glass wear cut resistant gloves and use tongs or tweezers to pick up pieces.
- Uncontaminated glassware can be disposed in the broken glass disposal box.
- Glass contaminated with acutely hazardous materials must be triple washed prior to disposal.
- Biologically contaminated glass waste is bagged, then placed in "biohazard" boxes or drums.
- Only fill $\frac{3}{4}$ of the box and then seal with tape.

