

A GUIDE TO THE SAFE HANDLING OF CHEMICALS

- A. TREAT ALL CHEMICALS WITH UTMOST RESPECT. Even water may be very dangerous if not used carefully. It participates in a great many reactions which may become violent or explosive for example.
- i) Reaction with some metals eg. Sodium, Lithium and even finely divided Zinc.
 - ii) Reaction with conc. Sulphuric Acid.
 - iii) Reactions with some molecular chlorides eg. PCl_3 , SOCl_2 , & CH_3COCl .
- B. DO NOT BREATHE ORGANIC SOLVENTS - Many are narcotic, some eg. Carbon Disulphide, Xylene & Toluene are poisonous.
- C. TREAT ALL CONC. ACIDS & ALKALIS WITH EXTRA CARE - Very painful & sometimes serious burns can result, often being slow to heal, by their misuse.
- D. POISONS - Mercury & its salts, Xylene, Toluene, Carbon Disulphide and most commonly Barium Chloride are all to be found in this Lab. They are all exceedingly toxic. Do not breathe vapours, wash any contaminated areas immediately with plenty of soap & water. Take off any contaminated clothing and wash well. If you feel unwell after using any chemicals, see a doctor immediately and state the names of the chemicals you used. DO NOT think "It'll be better soon", poisoning often results in a series of symptoms which follow on from each other.
- E. BROMINE. When using Bromine, use a fume cupboard - have plenty of Methylene Chloride and soft yellow petrol jelly at hand. Wash off any spills immediately and rub on plenty of jelly into the affected area - See a doctor.

DILUTING CONC. ACIDS - ALWAYS add the acid to the water, slowly with constant stirring and do not allow the temperature to rise too much.

SODIUM HYDROXIDE - in solution gives out much heat and may cause spitting and boiling. Cool the beaker in cold water & stir the solution constantly during dilution.

BEFORE USING ANY CHEMICALS - Read the bottle label carefully and fully acquaint yourself fully with all the hazards likely to be encountered before using them.

WASH YOUR HANDS - immediately after using chemicals - Always!

BROKEN GLASS. Chipped or broken glass ware should always be thrown out if it is deemed impossible to fine polish the damaged area.

AQUA REGIA - Any spills must be greatly diluted with water before mopping up otherwise a fire could result.

ACIDIC SPILLS - Dilute with Sodium Carbonate solution then absorb on tissues.

ALKALI SPILLS - Dilute with 10% HCL(aq) then absorb on tissues.

MERCURY SPILLS - Try to gather up as much mercury as possible using a piece of card to "scrape" it together. Add Zinc dust in excess to absorb. Pick up the amalgam and dispose of it thoughtfully eg. University. Sprinkle flowers of Sulphur over the whole area & leave for several days before brushing up.