Research Methodology in Chemistry

Edited by
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CHAPTER – 4

LABORATORY EQUIPMENT SAFETY

Nurziana Ngah

Glassware

✓ Accidents involving glassware are the leading cause of laboratory injuries. These can be avoided by following a few simple procedures. In general, be certain that you have received proper instructions before you use glass equipment designed for specialized tasks that involve unusual risks or potential injury. Listed below are some safety rules.

✓ Use and maintenances:

- Handle and store glassware carefully so as not to damage it or hurt yourself.
- Properly discard or repair damaged items.
- When inserting glass tubing into rubber stoppers, corks or when placing rubber tubing on glass hose connections:
  - Protect hands with a heavy glove or towel
  - Lubricate tubing or stopper with water or glycerol and be sure that the ends of the glass tubing are fire-polished
  - Hold hands close together to limit movement of glass should fracture occur
  - Substitute plastic or metal connections for glass ones whenever possible to decrease the risk of injury
  - Use glassware designed for vacuum work for that purpose
- When dealing with broken glass:
  - Wear hand protection when picking up the pieces
  - Use a broom to sweep small pieces into a dustpan
  - Package it in a rigid container (i.e. corrugated cardboard box) and seal to protect personnel from injury