



SAFETY MEASURES IN HEMATOLOGY LABORATORY GENERAL LABORATORY SAFETY RULES

1. *Avoiding hand to face contact:*

- Consumption and handling of food and drink or medication is forbidden in the laboratory. This includes gum, throat lozenges and asthma puffers.
- The application of cosmetics is taken place outside the laboratory. Hands must be washed before exiting to take refreshments or apply cosmetics.
- A headband or scrunchie is advisable to keep one's fringe clear of the eyes. Long hair is to be either tied back or up.
- Placing pens and pencils in the mouth are avoided.

2. *Personal protective equipment:*

- Safety glasses for all practical classes are needed during study. It is used as and when directed before handling hazardous chemicals and liquids. A laboratory coat or gown is required to both protect your skin and prevent minor splashes making your clothes. It must be removed when leaving the lab, even for a toilet break.
- Fully enclosed footwear is to be worn in the laboratory. Sandals, thongs, high heels, open-toed shoes, and closed-toed shoes which exposed the heels or top of the foot are ALL unsuitable.

3. *Good laboratory practice*

- Disposal procedures (e.g., Glass, sharps, chemical residues, biological material) as instructed are to be followed.
- Caps/ lids on bottle are replaced after each use.

4. *Situational awareness:*

- Familiarize yourself with evacuation procedures and fire-fighting equipment before commencing work.
- Ensure you understand the nature of each hazardous material you will handle, having read the material safety data sheet (MSDS) before the work.
- Remembering the laboratory is a workplace. Therefore, move around in a planned & predictable manner, remaining mindful of hazards. Practice professional & courteous behavior.
- Seek instruction before operating laboratory equipment. Follow Standard Operating Procedures (SOPs) where provided.
- Plan your tasks, avoiding spillage and splashes. Report all spillages.
- If an accident occurs, follow laboratory safety procedure.
- Ensure that your work area is clean and tidy as instructed & wash your hands before leaving the laboratory.

5. *Specific Hematology Laboratory Rules*

Assume every blood/ blood product, reagent, or specimen to contain pathogens and handle accordingly. Disposal of materials used during work:

a. Contaminated With Materials of Human Origin

- Contaminated disposable glassware (capillary tubes, glass slides) must be placed in the yellow sharp container.
- All contaminated or used needles, scalpels and sharps must be placed in the yellow sharp container.
- Contaminated test tubes and disposable materials are to be placed in the biohazard bag.



- Other contaminated materials such as gloves, blotting paper and tissue can be put in the large green “Contaminated waste” bin.

b. Non-Contaminated Material

- Non-contaminated paper waste, wet or dry, may be disposed of in the white lined “Clean Waste Only” bin.
- Uncontaminated broken glass must only be deposited in broken glass bins.
- All needles, scalpels and sharps must be placed in the yellow sharp container.

6. Decontamination Procedures for Spillage

a. Principle

Every biological sample and reagent in laboratory are to be handled as if it is infectious material. It is essential therefore for any spills of any biological sample or reagent to be decontaminated and disposed to minimize the risk of spreading infectious agents to lab professionals, staff, cleaners, and rubbish removal lists.

In the event of a spill or leak, decontamination procedure must be done immediately.

b. Blood spills on hard surfaces

- Gloves must be worn.
- Depending on size and location of spill: Squirt on equal amount of hypochlorite solution. Leave for 2 minutes. Swab up fluid with absorbent paper towels. Dispose of paper into biohazard bag. If a breakage has also occurred, after disinfection, transfer the contaminated glass, using a dustpan and swabs, to the contaminated disposal glassware container on your bench. The swabs are then placed in the autoclave bucket and the dustpan and rubber gloves swabbed with disinfectant.

c. Blood spills on blotting paper

- Gloves must be worn.
- If blood fully absorbed into paper, carefully transfer to a biohazard bag.
- Decontaminate bench top using previous technique for spills on hard surfaces.

d. Blood spills on clothing

- Gloves must be worn.
- Laboratory coats and gowns can be soaked in freshly prepared hypochlorite solution overnight prior to normal laundering.

e. Blood spills on skin

- Wash affected area with liquid soap for at least 20 seconds. Do not rub too hard as you may damage the protective effect of your skin.
- Rinse well.

f. Blood spills on eyes or in mouth

- Squirt copious amounts of tap water on affected areas, and alert lab manager as soon as possible.

References

- <https://www.biologydiscussion.com/hematology-2/laboratory-hematology-2/safety-measures-to-prevent-laboratory-hazards-hematology/80388>
- University of Medical Technology: Hematology Practical Guidance Handbook