



# EMERGENCY PROCEDURE AND ACCIDENTS

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# Outline

- ✓ Medical Emergency
- ✓ Fire Emergency
- ✓ Chemical Spill Emergency
- ✓ Biological Spill Emergency



# Objectives

- Demonstrate an understanding of emergency procedures and response protocols in a laboratory setting.

# Medical Emergency



## Major

- Remain calm.
- Initiate lifesaving measures if required.
- Do not move person unless there is danger of further harm.
- Keep person warm.
- Call for emergency response.

## Minor

- Initiate first aid.
- Report incident.

# Fire Emergency



## Major

- Alert people in area to evacuate.
- Activate nearest fire alarm or call Security number.
- Close doors to confine fire.
- Evacuate to safe area or exit building through stairwell.

## Minor

- Alert people in laboratory and activate alarm.
- Smother fire or use correct fire extinguisher.
- Aim extinguisher at base of fire.
- Always maintain accessible exit.

# Chemical Spill Emergency



## Major

- Attend to injured or contaminated persons and remove them from exposure.
- Alert people in the laboratory to evacuate.
- If spilled material is flammable, turn off ignition and heat sources.
- Close doors to affected area.

## Minor

- Alert people in immediate area of spill.
- Wear protective equipment, including safety goggles, gloves, and long-sleeve laboratory coat.
- Avoid breathing vapors from spill.
- Confine spill to small area.
- Use appropriate kit to neutralize and absorb inorganic acids and bases. Collect residue, place in container, and dispose as chemical waste.

# Biological Spill Emergency



- **Major**
- Attend to injured or contaminated persons and remove them from exposure.
- Alert people in immediate area of spill.
- Close doors to affected area.
- Put on protective equipment.
- Cover spill with paper towels or other absorbent materials.
- Carefully pour a freshly prepared 1 in 10 dilution of household bleach around the edges of the spill and then into the spill. Avoid splashing.
- Allow a 20-minute contact period for the bleach solution to be effective.
- Use paper towels to wipe up the spill.
- Place towels in a plastic bag and decontaminate in an autoclave.



## **Minor**

- Wear disposable gloves.
- Soak paper towels in disinfectant and place over spill area.
- Place towels in plastic bag for disposal.
- Clean spill area with fresh towels soaked in disinfectant.





# References

Sveinbjornsson, B. R., & Gizurarson, S. (2022). Handbook for Laboratory Safety. 1<sup>st</sup>. Elsevier.