

Winthrop University - Safety in the Chemistry Laboratory

Accidents and Accident Prevention

There are many potential hazards that exist in the laboratory. The best way to deal with such hazards is to prevent accidents from happening. The following are some guidelines for dealing with and preventing the more common accidents. When in the laboratory, use common sense, pay attention to what you are doing, and be alert as to what is going on around you.

- For any type of accident, notify your instructor immediately.
 - If you are attempting to assist someone, do not become a victim yourself. Wear safety glasses and gloves to prevent direct contact.
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Accidents

A. Chemical Exposure and/or Burns

1. Chemicals on the Skin in Confined Areas

- Immediately flush the area with cool water for at least 15 minutes. Remove all jewelry to facilitate removal of any residual material.
- Have someone else notify your laboratory instructor.
- Seek medical attention
- If a delayed reaction is noted, report immediately for medical attention and explain carefully what chemicals were involved.

2. Chemicals Spilled over a Large Area of the Body

- The person should immediately head to the nearest safety shower.
- Notify an instructor- Treat as a life threatening emergency. Call -911 or 323-3333.
- Once in the shower, rinse first, and then remove clothes taking care not to spread chemicals especially into the eyes.
- Wash head and remove clothing before removing goggles.
- Flush skin for 15 minutes, and seek immediate medical attention.
- If a fire blanket is available it can be used as a shower curtain for someone using the safety shower and then used to keep someone warm while waiting for emergency help to arrive.
- Avoid putting anything on the affected area; it may worsen the condition and cause irritation.
- Send MSDS with the injured person

3. Chemicals in the Eyes

- Get the victim to an eyewash station immediately, and rinse the eyes for at least 15 minutes.
- Eyelids have to be forcibly opened to ensure effective washing behind the eyelid.
- Remove contact lenses as soon as possible so that the eye can be thoroughly rinsed.
- Get medical attention immediately. All eye injuries must be treated at the Crawford Health Services.

4. Ingestion of Chemicals

- Identify the chemical ingested
- Call -911 immediately

B. Chemical Spills

- Turn off all sources of ignition.
- Notify individuals in the area of the spill.
- Notify your instructor immediately of the spill and the chemical that was spilled.
- If any injury is involved, and it can be done safely, attend to injured or contaminated persons, and remove them from exposure.
- Do not attempt to clean up the spill yourself. Your instructor will determine what needs to be done in order to clean up the spilled chemical.

D. Fires

- If possible, turn off all sources of ignition.
 - Notify everyone else in the laboratory.
 - **Notify your instructor immediately and send someone to find another faculty or staff member.**
 - If a person is on fire, help them drop to the floor and roll, or take them to a safety shower.
 - If the fire is spreading quickly or you are unsure as to what to do, evacuate the area and pull the fire alarm.
 - Do not attempt to put the fire out yourself.
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Prevention

A. Accidents

- Keep your workspace clean of clutter.
- Do not store any items on the floor of a laboratory, i.e. book bags. There are storage areas provided.
- Keep the sinks clear of waste. No solids of any kind ever go into the sink.
- Do not work with chipped or broken glassware.
- There are specially marked containers for all broken glass. **Do not throw glass in a trashcan.**

B. Fires

- The best way to handle fires is to prevent them.
 - The following is a list of some of the things you can do to help prevent fires from starting:
 - Keep your work area free of clutter
 - **Never leave a Bunsen burner unattended** and always turn off the gas when finished. Even if you plan on using the Bunsen burner again during the lab period, always turn the gas off after each use.
 - If the fire bell rings while you are working, **turn your Bunsen burner off** and exit the building calmly.
 - Never use an open flame to heat a flammable liquid.
 - When working with an open flame, keep your hair pulled back if it is long and watch that your clothing does not catch fire. Do not wear long, loose fitting clothing.
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