Understanding the Basis of Laboratory Safety
PETE 310

Before Lab Work, Get to Know:

- Hazards of materials & agents and their prescribed safety procedures
- Emergency spill procedures, i.e. use of adsorbents
- Designated escape route and alternate
- Location of fire ext., eye wash, shower, first aid, and spill kits

Before Lab Work, Get to Know:

- Emergency telephone numbers and reporting procedures
- Your location
- Professor’s name, TA
- Technician’s name

9-1-1
While Working in the Lab:

- Shoes with full coverage and good grip soles
- Restrain long hair, loose clothing and jewelry
- Use appropriate eye, skin, and hand protection

Eye protection

- Protects against risk of flying objects or dust particles, splashes of hazardous materials or harmful rays

Safety Glasses

- Unbreakable lenses of plastic or tempered glass
- For light-to-moderate work
- Can be prescription lenses
- Do not interfere with contact lenses
Goggles

- Work with significant risk of splash of chemicals or projectiles
- Can be worn over prescription glasses

Face Shield

- Work with significant risk of splash on face or possible explosion
- Face shield protects face adequately but not eyes

Hand Protection

- Protects against risk of cuts, abrasions, burns, or exposure to hazardous materials.
- Requires selection of the appropriate chemical resistant gloves
While Working in the Lab:

✓ Follow universal precautions

✓ Handle unknowns as if they were hazardous

While Working in the Lab:

✓ Handle volatiles in a chemical fume hood

While Working in the Lab:

✓ Use mechanical transfer devices
While Working in the Lab:

- Authorized persons only
- Identify EVERYTHING!
- No food, beverages, tobacco products, or application of cosmetics

While Working in the Lab:

Report all:
- Accidents
- Injuries
- Fires
- Spills
- Close calls

While Working in the Lab:

- 1 Disabling injury
- 10 Minor injuries
- 30 Property damage incidents
- 600 Close Calls

Before Leaving the Lab:

Turn off:
- Gas
- Water
- Power supplies
- Vacuum lines
- Compression lines
- Heating apparatus
Before Leaving the Lab:

- Identify and package waste, dispose properly
- Lock/out and tag/out defective equipment
- Decontaminate work surfaces and equipment

Before Leaving the Lab:

- Return unused equipment, apparatus, etc.
- Leave lab coat in the lab
- Wash
- Close and lock door

Essentials of Laboratory Safety

Source: Mr. Wayne Wood
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