

OCCUPATIONAL HEALTH AND SAFETY UPDATE

The following is the fourth installment in a series of articles offered by the Occupational Health and Safety Committee. This series is intended to assist laboratories to prepare for the safety component of the College of Physicians and Surgeons Laboratory Accreditation Program.

The Laboratory Safety Manual should include written policies and procedures providing information on the safe handling of toxic, corrosive, and carcinogenic chemicals. This section will also discuss fume hood safety.

Toxic, Corrosive & Carcinogen Materials Safety

It is important to obtain information on all relevant properties of a substance in order to recognize and evaluate its hazards when determining the appropriate methods for safe use.

1. All toxic, corrosive and carcinogenic substances used by the laboratory must follow WHMIS regulations. This is accomplished by labeling all substances according to WHMIS standards and supplying a current MSDS sheet for personnel.
2. Personnel using toxic, corrosive or carcinogenic substances should protect themselves by wearing; heavy rubber aprons, gloves, face shields or goggles, dust masks or respirators, gowns or lab coats and closed-toed shoes.
3. Areas in which hazardous chemicals are being used, should have adequate emergency shower facilities and eyewash devices.
4. Toxic, corrosive and carcinogenic chemicals must be stored in a self contained enclosure, room or building that is isolated from work related areas and is adequately ventilated. None compatible substances should be segregated for storage.
5. Acid bottle carriers must be used for containers of hazardous chemicals with volumes in excess of 0.5 liters.
6. The laboratory should have spill response kits readily available. Laboratory personal should have appropriate training on handling spills of hazardous material. Instructions must be readily available for dealing with such spills.
7. Precautions should be taken to reduce the risk of exposure to toxic, corrosive and carcinogenic chemicals by substituting with less toxic substances.
8. Specific instructions on steps to be taken should exposure occur must be available.

Fume Hood Safety

1. All chemicals, whose vapor represent a health hazard must be handled in a chemical fume hood.
2. Verify and document that the fume hood is functioning properly before commencing work.
3. The fume hood should be maintained uncluttered, so as not to compromise its effectiveness.
4. Ensure that the exhaust vent is in a safe location relative to ventilation intake systems.
5. Fume hoods must be annually inspected for face velocity and documented by qualified personnel in accordance with Canadian Standards Association CSA. Auxiliary filters (HEPA, charcoal, etc.) installed in fume hoods must also be annually tested.