LABORATORY EMERGENCY PROCEDURES
EMERGENCY PROCEDURES

• OBJECTIVES

• Learn the minimum requirements for developing an Emergency Plan.

• Learn how to deal with Spills and Splashes.

• Learn what to do in case of earthquake and fire while processing samples.
Emergency Response Plan

“It is a plan developed to address common and specific emergency situations that may arise in the laboratory or facility.”
EMERGENCY RESPONSE PLAN DEVELOPMENT

Minimum requirements

• Person responsible for the development

• Consultation plan for coordination with local emergency units/organizations

• Risk assessment for identification of emergency scenarios and mitigation strategies.

• Emergency/evacuation routes.
Minimum requirements *(Continued)*

- Protocols for the safe removal, transport and treatment of contaminated personnel and/or objects.

- Consider emergencies that may happen after working hours.

- Emergency access procedures to address access control measures in the work place.

- Emergency training program, including education on the safe and effective use of emergency equipment.
EMERGENCY RESPONSE PLAN DEVELOPMENT

Minimum requirements (Continued)

• Emergency exercise plan

• Emergency or incident reporting and investigation procedure.

• Availability of emergency equipment in the laboratory.

• Procedure for notifying key personnel or agency.
EMERGENCY PROCEDURES

- Spills and splashes

  - Cover the spill immediately with absorbent material (gauze, cotton mat, paper towel) then flood with 0.5% Sodium Hypochlorite solution.

  - Notify the buddy and safety officer immediately

  - If PPE contact is suspected, decontaminate affected area of the PPE then leave the area, doff PPE and don a new set.

  - The buddy should mark the area with warning sign.
EMERGENCY PROCEDURES

- Spills and splashes

  - Allow 10 minutes contact time then gently clean the area of the spill in a circular motion starting from the outer edges towards the center.

  - If there are broken glass or sharps, use forceps to pick-up the pieces and absorbent material.

  - If splashes are suspected, decontaminate the area within 1 meter of the spill, including vertical surfaces (e.g. walls and sides of equipment)
BIOLOGICAL SPILL KIT

- Biological spills kits should be available and readily accessible in the laboratory area. Which should contain at least:

  - Enough absorbent material (Gauze, cotton mat, or paper towel) and decontaminating agent (0.5% Sodium Hypochlorite solution) to cover an area of 1 meter in radius.

  - Autoclavable, leak-proof bags to contain waste from clean-up procedure.

  - Long handle forceps

  - Warning signs, marker or label.
EMERGENCY PROCEDURES

- Earthquake, and Fire in the immediate vicinity
  - Secure samples by closing the door of the BSC.
  - Remove outer gloves.
  - Grab a bottle of decontaminating agent (one per person)
  - Exit the facility. Taking care not come in direct contact with other people.
EMERGENCY PROCEDURES

- Earthquake, and Fire in the immediate vicinity
  
  • Isolate your team (buddy and safety officer) and decontaminate before removing the PPE.
  
  • Inform ICC nurse for appropriate post exposure treatment
  
  • Inform local emergency responding units of the hazardous material left behind.
EMERGENCY PROCEDURES

- Health Emergencies (ambulatory)
  
  • Stop all work and notify immediately the buddy and the safety officer.
  
  • Leave the area, Doff PPE and perform hand hygiene.
  
  • Inform ICC and proceed to EHS for management.
EMERGENCY PROCEDURES

- Health Emergencies (unconscious)
  
  - Stop all work and notify immediately the buddy or safety officer.
  
  - Secure samples.
  
  - Remove outer gloves.
  
  - Grab a bottle of decontaminating agent (one per person)
  
  - Carry unconscious person outside of the laboratory area.
EMERGENCY PROCEDURES

- Health Emergencies (unconscious)

  • Call for emergency health services.

  • Check for breathing.

  • If the person is breathing, Disinfect and doff PPE’s then move to a clean area.

  • If the person is not breathing, perform cardiac massage according to HEMS guidelines without removing PPE’s.
EMERGENCY PROCEDURES

• Reminders:

  • BSC should have back-up power supply either by generator or using a UPS.
  
  • Eye wash station should be available and readily accessible in the laboratory area.
  
  • First aid kits should be available and readily accessible near the laboratory area.
  
  • Emergency Response Plan Established.
References

- Canadian Biosafety Standards and Guidelines, 1st ed. 2014
- http://www.cdc.gov/HAI/prevent/prevent_pubs.html