

## **Standard Operating Procedures For ASF-PHT Lab**

### **General Lab Safety**

Facility: ASF 3C Tupper      Physiology and Biophysics Department 494-1302, 452-3891  
          PHT 3C Tupper        Physiology and Biophysics Department 494-2672, 488-6760  
          Lab phone number    494-2673

Scope: This SOP details general lab safety procedures to be followed in the ASF-PHT lab.

Date: 20 September 2013

#### **General:**

This procedure addresses general safety and health requirements for work in the ASF-PHT laboratory.

#### **Emergency Phone Numbers and Contacts:**

Environmental Health and Safety Office 494-**2495** Pauline Jones, Steve Ellis  
<http://environmentalhealthandsafetyoffice.dal.ca/index.html>

Security 494-**4109** \*\*Dial Security before calling **911**\*\*

Dalhousie Health Services 494-**2171**

#### **General Safety Procedures:**

- If an emergency happens call security at **4109** - they will contact **911** if necessary.
- Know where the eye wash station and nearest safety shower are located and how to use each
- Label all solutions with contents (date, initials, chemicals)
- Clean up after yourself - don't leave a mess for someone else to clean
- Rinse all glassware and leave dirty glassware immersed in soapy solution in sink and clean later
- No eating, drinking, smoking or storing of food, personal belongings or food utensils in the lab areas
- No application of cosmetics or insertion/removal of contact lenses in the lab
- Long hair must be tied back in a safe manner to prevent contact with hands, equipment and containers or open flames

- Suitable footwear with closed toes must be worn in lab area at all times
- Use face and eye protection if necessary – safety glasses are located under the pipette puller in a drawer
- Wear gloves for all procedures that may involve direct skin contact with hazardous materials
- Needles, syringes and glass waste must be disposed of properly in the labeled containers
- Hands should be washed after removal of gloves, before leaving the lab and after handling and after handling any chemical or material which is considered hazardous
- Main lab doors are to be kept closed at all times. It is not necessary to lock the door unless the lab is empty. Be sure to lock when leaving for the day.

### **Hazard Identification**

- All containers must have a legible, firmly attached label showing the contents of the container
- Material safety data sheets (MSDS) received with materials must be maintained and updated in MSDS data book. It is located in the ASF Lab bookcase labeled MSDS
- Determine safe handling procedures before opening chemicals - gloves and mask if necessary, fume hood if needed, cautions and procedures required
- Read warning labels and MSDS sheets before using chemicals, especially for the first time

### **Medical Program**

- Medical surveillance including consultation and follow-up shall be necessary under the following circumstances:
  1. An employee reveals an exposure to a chemical which has medical surveillance requirements
  2. Whenever a lab employee develops signs or symptoms that may be associated with a hazardous chemical to which the employee may have been exposed to in the lab
  3. Whenever a spill, leak or explosion results in the likelihood of hazardous exposure

First aid kits are located in each lab, and there is a first aid kit located in the office in room 3-B2

Emergency medical assistance is available by calling Security at **4109**. They will call **911** if necessary.

- If an employee is transported by ambulance and is unable to provide necessary information at the time of transport a coworker should accompany the injured employee

-Accidents and injuries shall be reported to lab PI's and treated immediately. Injuries may be treated by using the first aid kit supplied in each lab if there is a staff member who is capable of doing so. All injuries shall be investigated by the lab PI's and reported to the University Safety Office.

-Written record of any spills, accidents or exposures should be maintained on file by the PI

## **Emergency Equipment**

Each lab member must be familiar with the location, application and correct ways to operate the following safety equipment:

1. Fire extinguishers
2. Fire alarms
3. Safety Shower
4. Eye wash station
5. First aid kit
6. Emergency gas shut off valve
7. Location of emergency telephone numbers and telephones

-Safety showers are located in the washrooms of each floor. Eye wash stations are located in each lab and are attached to the sink. To use eye wash station, turn on the water. Pull out the plug on the front of the station, and water will be diverted through the eye wash. Blink rapidly while rinsing eyes and call for help.

-Fire extinguishers are located in each end of Tupper Building on each floor in the hallway. Fire extinguishers are distinctly marked for appropriate hazards. Each lab is responsible for notifying Security at **4109** if extinguishers are removed, used for fire or is in need of repair. There is a fire extinguisher in the main laboratory.

-Fire alarms are located in the main hallways. Pull down on the lever if you need to sound the alarm. First aid kits are available for minor injuries in the office or in the labs.

-If the fire alarm sounds, you **MUST** exit the building. Use the stair well and proceed outside and remain at least 100 ft from the building. Fire Safety Wardens will check floors to ensure everyone is evacuated. If you refuse to leave, there will be serious consequences. You will not be allowed re-entry until the building has been cleared by the Halifax Fire Department. At this point, the alarm will stop sounding and the Fire Safety Wardens will usher you back into the building.

-Wear gloves, lab coat and goggles whenever dealing with chemicals that may splash

-Do not wear contact lenses when dealing with solvents

-If splashed with contaminated materials, remove affected clothing, flush area with water for at least 15 minutes and call Security at **4109** for assistance.

-For eye splashes, flush eyes with copious amounts of water and contact Security at **4109**

### **Employee Training**

-All lab members must be kept up to date with WHMIS training. It is available online for those who have taken it before. WHMIS training is required to be updated every 2 years.

-All employees shall be notified of the dangerous chemicals located in the lab.

-All employees will be trained properly for the use of the Biosafety Chemical Cabinet if needed

-All employees must read the safety protocols outlined in this standard operating procedure guideline.

-A copy of the Lab Biosafety Guidelines (peach book) and MSDS sheets are located in ASF-PHT lab 3C

### **Waste Disposal**

-There are special containers located in each lab for specific waste disposal, such as glassware, sharps and chemicals for waste disposal.

-Broken glass will be placed into a cardboard box, taped shut and clearly marked with BROKEN GLASS, lab phone number and contact name and placed by the freight elevators for disposal.

-Sharps are to be placed in the Yellow biohazard collection container supplied in each lab. When 3/4 full, these are to be replaced and the full container will be brought to the loading dock of the Tupper building. There is a bin there just for sharps. Other thick walled plastic containers are also approved for use for sharps containers.

-Any chemicals for waste disposal must be clearly labeled with chemicals present, molarity, lab name and contact number and sealed tightly to prevent leaks. Chemicals may be stored in the fume hood until these products are brought to the Hazardous Waste collection. Do not leave any chemicals unlabeled. Waste collection is generally the first Thursday of each month around 9:30am in the Tupper loading dock. All chemicals must be approved of for disposal by Steve Beaton.

### **General Chemical Handling**

-Know as much as possible about the chemicals that you are using. Read the labels and the

MSDS provided with each chemical. Do not use any chemical if you are unaware of its hazards.

If a spill happens, call Security at **4109** and report incident to your supervisor. If you are unsure how to clean up the spill, leave it for the Safety people to handle. If at any time you feel dizzy or faint, evacuate the premises immediately and call for help. **4109**

### **-Compressed Gas Cylinders-**

Must be stored in upright, strapped in system. Cylinders are under extreme pressure and sudden release of this energy can cause serious and fatal injuries.

-Check cylinders to ensure there are no leaks - listen for hissing noises and watch pressure gages

-Ensure pressure gage and regulator are fitted tightly before opening the valve at the top of the cylinder

-Transport cylinders in approved transport carrier, and ensure top cap is fitted tightly

-Be sure to mark empty cylinders as such with EMPTY, lab name and phone number on a piece of tape for return to cylinder company

### **-Freezers and Fridges-**

There is a chemical list on the lab web page which details the contents of the freezers in the lab as well as the fridges. This list is password protected. Please contact your PI for the password.

-When opening the -80° freezer, ensure that protective gloves are worn. Skin damage occurs rapidly when in contact for short periods of time

-The -80° freezer and the -20° freezer in ASF-PHT lab 3C have a suction seal - when you open the door then close it, it will seal the door for approximately 15 seconds before you are able to re-open it.

**DO NOT** pull on the door - the freezer or fridge may fall on top of you. Wait 15 seconds then retry to open the door.

-The freezers and fridges must remain on at all times. They are plugged in to the emergency power source. If you notice the freezer or fridge is not on or the buzzer is going off, ask the technician or PI for assistance.

### **-Power and After Hours-**

Tupper building has been outfitted with an emergency back up power system which should immediately come on if there is a power failure.

-If you enter Tupper building or are already in the building when there is a power failure, call **4109** to alert Security. Do not use the elevators. Stairwells will remain lit with emergency lighting for approximately 30 minutes after the power failure. If necessary, evacuate the building. Do not re-enter until the building has been cleared by Security.

-If necessary to gain access to Tupper Building after hours, be sure to have your Dalhousie ID card with B00 number. You will not be allowed entry without it. If you need to get in and have no key, contact Security at **4109**. They will use their discretion.

**\*\*For other emergency procedures, see the Dalhousie University Emergency Procedures sheets following this information. \*\***

### **-Biological Safety Cabinets-**

-The BSC is certified yearly and maintained as needed

### **-Lab Equipment-**

All staff members will be trained on equipment as required. If you are unsure how to use a piece of equipment, ask the technician or PI for assistance.

-Lab equipment will be maintained routinely by the technician or by the operator of the equipment

-Please alert the technician or PI if there is a problem with a piece of lab equipment

-There is an autoclave available for use in Tupper Building 3F. The PI or technician will have a key to this room

-Autoclave maintenance is performed by the department technician on a routine basis

### **-Animal Facilities-**

Animal facilities are located in ASF-PHT lab 3C in Tupper Building. These facilities are for lab members only with the exception of permission from the PI's.

-Staff should be properly trained in the handling and are informed of the animal's general characteristics before handling

-The technician is responsible for the day to day maintenance of the animals. Please inform the technician or your PI if you notice any problems with the Animals or the facility

