

UBC Chemistry Department SAFETY ORIENTATION

Last updated: July 15, 2014

Online at: <http://www.chem.ubc.ca/safety#safety-1> and click on "Training"

Welcome to UBC Chemistry Department

The overall safety program at UBC is overseen by the Risk Management Services <http://www.riskmanagement.ubc.ca/>; UBC Policy #7 provides the framework for Safety implementation in the university <http://www.universitycounsel.ubc.ca/policies/policy7.pdf>

All members new to the Chemistry Department must receive appropriate training and orientation in the hazards of their work sites and the procedures that must be followed to safely perform their work. The University's Safety Policy #7 requires that administrative heads of units ensure that all persons working or studying within their unit are trained in and follow all environmental and safety procedures. **Accident rates for new and young workers are significantly higher than for mature and experienced workers. In response to this reality, WorksafeBC has proclaimed an amendment to the Occupational Health and Safety Regulation, effective July 26, 2007, that requires training and orientation to be provided to new Department members before beginning any work.** The regulation further defines the workplace specific topics that must be addressed in the orientation program. For a copy of the new regulations please see the WorksafeBC website at: <http://www.worksafebc.com/>

Orientation training must be conducted at the worksite by the immediate supervisor or designate. Safety training involving hands-on demonstrations and introduction to specific workplace hazards and facilities are essential to ensure that the orientation is effective. The orientation must be documented and signed off by the worker and the training records kept for possible review by WorksafeBC inspectors or internal auditors.

Department or unit specific training and orientation may need to be supplemented by other safety courses. For instance, the University requires that employees and students pass an RMS course in Laboratory Radiation, Biosafety or Chemical Safety before working independently in these areas. For a list of RMS courses check the website at: <http://www.riskmanagement.ubc.ca/courses>

If a desired course is not listed, please contact the ChemDept Safety Adviser at (604) 827-5216. Special arrangements may be possible.

For clarification of any issues outlined herein, please contact the ChemDept Safety Adviser at (604) 827-5216 or the Risk Management Services 822-2029.

Rights and responsibilities:

Under UBC Policy# 7 – Review the Safety Policy with the worker. Explain the roles and responsibilities of supervisors and workers, the requirements to observe all rules, be safety conscious, report accidents and hazards to their supervisor and support the safety committee.

Date:

**Instructor
Initials**

**Worker
Initials**

Right to Refuse Unsafe Work

Supervisors must inform employees regarding all known hazards and potential risks in their work environment. All employees have a right to refuse dangerous work if they have reasonable cause to believe that a danger exists.

Under the WorksafeBC regulation – Explain under Regulation 3.12 the right and duty to refuse unsafe work and the work refusal process. The worker must also be told of the protection against discrimination under the WorkSafeBC legislation. The right to know the hazards of the work and to participate in safety activities through the safety committee must also be explained.

Date:	Instructor Initials	Worker Initials
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Chemical Exposure during Pregnancy

Female scientists who are planning for pregnancy or become pregnant must immediately inform their supervisor to discuss all planned experimental research activities, and devise a mutually agreeable plan for future work.

Date:	Instructor Initials	Worker Initials
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Workplace Safety Rules:

Health and Safety Work Philosophy

ChemDept is committed to ensuring that every employee, student and visitor is provided with a safe working environment.

UBC and ChemDept are committed to providing a healthy, safe and secure workplace for all workers. All workers are required to be compliant with, WCB OHS regulations, and the applicable UBC safety policies and procedures.

Workers will be provided with training and information covering the work to be performed. This training should include hands-on demonstrations and require the worker to perform the tasks as part of the learning process.

Responsibility for Health and Safety

Employees are required to participate in the Safety Program, recommend actions to improve its effectiveness and comply with the established policies, directives and procedures. They will work in a diligent, safe manner and report real or potential hazards to their supervisors and to Safety Committee members. Review attached WCB - Roles and Responsibilities Info Sheet.

http://www.chem.ubc.ca/sites/default/files/wysiwyg_uploads/facilities/safety/training/wcb_-_responsibility_for_safety.pdf

Safety Manual

The UBC-RMS Laboratory Chemical Reference Safety Manual is available at <http://www.riskmanagement.ubc.ca/sites/riskmanagement.ubc.ca/files/uploads/Documents/Chemical%20Lab%20Safety%20ManualDec2013.pdf> .

Safety Notice Boards

Safety Notice Boards are located in the Chemistry Main Office, Mail Room (D221), in the GradStudent lounge (D211) and directly outside the Safety Office , Rm A237, of the A building. The 3 most recent months' Safety Committee meeting Minutes; WCB inspection reports; Safety events and other notices are posted. Safety committee minutes are available to ChemDept workers by logging in at: <https://portal.chem.ubc.ca:888/login.php> Once logged in, review the menu bar on left for Safety Minutes.

Safety Committee

The goal of the Safety Committee is to create a healthy and safe work environment for all personnel. List of committee members is available at:

http://www.chem.ubc.ca/sites/default/files/wysiwyg_uploads/facilities/safety/training/safety_committee.pdf

Review the department's health and safety program

Review the ChemDept health and safety manual. Explain the departmental program including the departmental safety policy, safety training requirements, inspectional programs, accident investigations, the role of the safety committee and the management systems in place to ensure a safe work place. Refer the worker to the RMS web site for further safety information <http://www.riskmanagement.ubc.ca/>

Ensure the worker knows where to find the names of the Safety Committee members' and contact information for the ChemDept Safety Office at chemsafe@chem.ubc.ca .

Date:

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Safety Training

Worker's training must be completed **before commencing any work in research/service lab areas**. Training requirements are based on the work hazard.

Faculty/Staff/Students/Volunteers/Visitors working in ChemDept Research/Service Labs are personally required to maintain, and produce upon request, records documenting their UBC Safety Training. Red Safety Training Record folders are available outside the ChemDept Safety Office (A237); you are welcome to take one.

UBC - Risk Management chemical safety training and Fire Extinguisher training are the minimum training required before commencing any work in ChemDept research/service lab areas. Additional work specific training is provided by the Supervisor/Principle Investigator (PI)/Faculty Member.

Review the table below for UBC-RMS training courses. You can start this at their earliest convenience), if you have not registered on this course system before, you will be prompted to create an account that you can use for all of the RMS courses. [You can access all of the RMS courses here](#). Once you have completed the course, you will receive a certificate of completion.

If you have difficulties with registration, please contact: chemsafe@chem.ubc.ca

Hazard	Training
Chemical	UBC RMS Laboratory chemical safety: http://www.riskmanagement.ubc.ca/courses/laboratory-chemical-safety
Fire Extinguisher	Contact: chemsafe@chem.ubc.ca for the next available training dates
Biological	UBC RMS Bio-safety training: http://www.riskmanagement.ubc.ca/courses/laboratory-biological-safety
Radiation	Radio-isotope safety training by UBC RMS http://www.riskmanagement.ubc.ca/courses/radionuclide-safety-methodology
Laser	UBC RMS Laser Safety: http://www.riskmanagement.ubc.ca/courses/laser-safety
WHMIS Course	UBC RMS WHMIS: http://riskmanagement.ubc.ca/node/554
Preventing and Addressing Bullying & Harassment	UBC RMS Preventing Workplace Bullying & Harassment: http://riskmanagement.ubc.ca/courses/preventing-and-addressing-bullying-harassment

Personal Protective Equipment (PPE)

Use appropriate personal protective equipment <http://www.riskmanagement.ubc.ca/health-safety/laboratory-safety/personal-protective-equipment> Basic PPE in the chemistry labs include: safety glasses, 100% cotton lab coat, closed top shoes (such walking shoes or boots, ie no mesh tops such as on running shoes), gloves.

PPE video online at: http://www2.chem.ubc.ca/safety/safety_manual/ppe.mpg

Also recommended viewing is a YouTube video: Experimenting with Danger at:
<http://www.youtube.com/watch?v=ALBWxGik64A&feature=youtu.be>

Personal Protective Equipment rules

The use of personal protective equipment to protect against job hazards must be addressed including the rules of use, limitations, care and maintenance, and instruction to report any problems with such equipment for resolution. Workers should be properly fitted and be able to demonstrate the proper use of the equipment.

This may include clothing rules, footwear, and cold or wet weather clothing. Workers must be aware that ChemDept is responsible for providing all required PPE. Workers are required and responsible to use PPE provided in accordance with ChemDept safety policies. Inform the worker of the allowances available for protective footwear if it is required.

Date:	Instructor Initials	Worker Initials
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No Food or Beverages to be stored or consumed in any Research/Service Lab areas

No Food or Beverages to be stored or consumed in any Research/Service Lab areas

Absolutely no food or beverages are to be consumed or stored in areas designated as lab space. Garbage/waste containers in lab space cannot be used for food/beverage waste materials.

Date:	Instructor Initials	Worker Initials
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Housekeeping Requirements and Personal Conduct in Lab/Service Areas

Housekeeping issues include:

- Keep doorways and aisles clean of boxes, equipment and supplies
- Keep work area clean and tidy
- Keep emergency eyewash station and fire extinguisher unobstructed
- Ensure that spills are cleaned up immediately
- Avoid tripping hazards, pick up objects that have been dropped/broken on the floor
- Close drawers of lab benches, desks and filing cabinets when not in use
- File or store heavier items on bottom shelves
- Use ladder or step stool to reach high places

WCB Part 3 Division 3 (116) - **General duties of workers**, specifically covers horseplay, threats, assaults and fighting are prohibited, as are practical jokes and unnecessary running.

<https://www2.worksafebc.com/Publications/OHSRegulation/WorkersCompensationAct.asp?ReportID=19388>

Housekeeping and Personal Conduct

Housekeeping should be reviewed with instructions to keep aisles and exits clear. Access to emergency equipment such as fire extinguishers or emergency showers must be maintained at all times.

Proper conduct is reviewed with instruction that horseplay, threats, assaults and fighting are prohibited, as are practical jokes and unnecessary running. WCB Part 3 Division 3 (116)

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Work Hazards and Safe Work Practices

The following are the type of hazards that may be found in the lab and/or shop areas in the department:

Chemical hazard, radiation hazard, biological hazard, noise, high pressure hazard, extreme temperature hazard, electrical hazard, mechanical/equipment hazard.

Supervisor and work need to fully and clearly review equipment use and work processes, including ergonomic risks.

The worker must be instructed in and be able to demonstrate the specific work tasks to be performed. The supervisor must observe the worker performing the task and determine that the worker is capable of working safely. As new tasks are assigned, additional training must be provided. The safety and maintenance requirements of equipment such as daily inspection before use and reporting of any equipment problems must be covered. Defective equipment is not to be used.

If working in proximity to hazardous materials is part of the worker's duties then training must be provided in the Workplace Hazardous Material Information System. Training should include labeling information, MSDS access and procedures for specific chemicals and processes including hazard controls and emergency procedures. Workers must be able to answer the following questions:

What are the hazards of the materials in the workplace?

How do you protect yourself?

Where can you find hazard information?

What procedures do you follow in an emergency?

- Familiarize locations for accessing ChemDept and RMS safety information
- Workers need to read MSDS before handling chemicals:
 - <http://www.chem.ubc.ca/safety#safety-4> under **Training heading then click on WHMIS;**
 - also refer to RMS info at: <http://riskmanagement.ubc.ca/health-safety/chemical-safety/materials-safety-data-sheets>
- Use appropriate personal protective equipment (gloves, goggles, lab coat, etc) for the job
- Know where the Emergency eyewash/shower station is located
- Know where the closest spill cart is (**A352, A237, B170, D413, E215 & E415**)
- Use a buddy system if you must work alone **and notify your Supervisor/PI**

Safe Work Practices

Review with the worker ChemDept and University rules covering the work to be performed. Topics to include restrictions on certain pieces of equipment, specific operating instructions, prohibition of eating in laboratories, and PPE required. These instructions should be in writing or on ChemDept or RMS websites. Safety rules should address all the hazards that may be encountered. This training should include hands-on demonstrations and require the worker to perform the tasks as part of the learning process. Workers are to maintain a record of their Safety Training for review upon request.

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Working Alone

Restrictions are placed on the use of laboratories or workshop equipment after hours unless specific arrangements have been made to address emergency issues. Working alone may increase the risk to personal safety and/or security.

Outside regular hours:

- Let someone (your supervisor or someone from the next door lab) know that you are working alone, so they can come and check up on you.
- Let the AMS Safe Walk program know that you will be working late, arrange for check-up at least once during every shift, call (604) 822-5355, or visit the website www.ams.ubc.ca/services/ams-safewalk/
- Check-in hourly (set a timer to remind you) with someone.

Rules for working alone

If the work requires working alone or in isolation then the procedures for monitoring and summoning assistance must be fully explained and documented. The procedures must include a system for checking on the well-being of the worker and establishing the time intervals for checking on the isolated worker.

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Workplace Violence

If workers are in a location that involves contact with the public, they must be advised of any risks that may arise including abusive behavior, robbery, and assault or possible confrontation.

Reporting:

- If you are faced with imminent threat of violence call “911” AND Campus Security (604-822-2222)
- Report all incidents of violence to your supervisor, the Safety Committee or UBC-RMS

Preventing workplace bullying and harassment: <http://bullyingandharassment.ubc.ca/>

Procedures to avoid violence in the workplace

If violence in the work area is a risk then the procedures to protect the workers from violence or assaults must be covered. Workers should be advised that "violence" includes threatening statements, gestures to the individual or others as well as physical assault. Procedures for summoning assistance must be covered. Any instances must be reported to the supervisor for investigation and possible remediation.

Workers must be advised of the University services available to reduce risks such as evening Safewalk services, shuttle buses to remote parking areas and blue light phones. See Campus Security website at <http://www.security.ubc.ca/> for details.

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Ergonomics

Equipment use and work processes, including ergonomic risks must be fully and clearly reviewed with Supervisor.

Be aware of factors causing ergonomics injuries and the signs and symptoms of musculoskeletal illnesses or injuries. Review the UBC- Ergonomics web link at: <http://www.hr.ubc.ca/health/ergonomics/laboratory/>

Discuss your concerns with your Supervisor to determine what solutions may be available.

Fume Hood Use and Shut-down Protocols

Fume Hood Use and Shut-down Protocols

The Supervisor/PI has reviewed and the Student/Worker has understood the attached fume hood use and shut-down protocols.

Date:

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Emergency Procedures:

Emergency Procedures

Posters with Emergency procedures are located in every lab, workshop and common area of ChemDept. It is your responsibility to familiarize yourself with the information on the poster and these posters are located.

- Emergency phone numbers
- Evacuation routes
- First Aid information
- Spill control information
- Fire safety procedures
- Procedures for other emergency situations

First Aid

For immediate response contact the ChemDept first aid attendants for assistance; after regular hours obtain first aid by calling **2-4444** or **911**. Information is available on the Emergency Procedures posters or online at:

http://www.chem.ubc.ca/sites/default/files/wysiwyg_uploads/facilities/safety/2014_emergency_poster.pdf

Procedures for Reporting Incidents or Unsafe Conditions

Report all accidents/incidents involving personal injury or property damage as soon as possible to your supervisor and to the Safety Officer (827-5216, or chemsafe@chem.ubc.ca).

Forms are available online at: <http://www.chem.ubc.ca/safety> under **Forms heading**

Fire Safety

- Know how to identify who your fire wardens are: they will be wearing orange vests during Emergencies
- Know where the nearest fire exits are located in areas where you work
- Know the location of the fire extinguisher (by the entrance to the lab/shop and in hallway)
- In the case of fire/evacuation, know where your assembly area for your ChemDept Building
- Familiarize yourself with the Emergency Procedure Poster and emergency phone numbers

http://www.chem.ubc.ca/sites/default/files/wysiwyg_uploads/facilities/safety/2014_emergency_poster.pdf

Emergency and Fire Safety Procedures

Discuss with the Worker some of the possible emergency situations, and the appropriate emergency procedures. **Location of fire alarms, extinguishers, safety showers and eyewashes, exit routes, assembly points, and civic addresses must be physically demonstrated.**

Hazardous material incidents must be covered with instructions to summon assistance before attempting any major spill clean-up. **The new worker should complete the attached Personal Safety Checklist to document emergency response training.**

First Aid Services, Reporting injuries or illness

Ensure the worker is informed of how to summons Emergency assistance and locations of Emergency Procedures Posters and procedures for reporting illness or injury to the Supervisor must be covered including the requirement to report any injuries as soon as possible preferably before leaving the worksite.

http://worksafebc.com/claims/report_injury/default.asp The worker should understand that the University will report any injury or illness to WorkSafeBC.

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Attachments:

Fume Hood Use and Shut-down Protocols

Personal Safety Checklist

Individual's Record of UBC Safety Training