University of Victoria

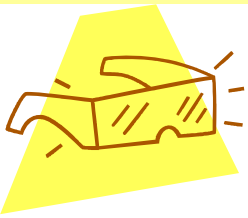
Department of Chemistry

Safety Instructions

10-6-2017

General Safe Practice

A. PERSONAL PROTECTION



1. **Eye protection.**

SAFETY GLASSES MUST BE WORN AT ALL TIMES IN THE LABORATORY

(a.) Sources of safety glasses:

Safety goggles and safety glasses for Department personnel are available from Science Stores. They can also be purchased from numerous safety supply companies. (Contact Science Stores for information on external sources of eye protection.) Safety glasses with prescription lenses can be obtained from opticians. Regular prescription glasses are not sufficient; if worn, they must be covered by safety goggles.

(b.) Face shields:

Research groups involved in synthetic chemistry should be equipped with full-face shields for use during large scale reactions of corrosive materials. The operation of high vacuum lines or pressurized apparatus also requires full-face protection, particularly when the materials involved are potentially explosive.

(c.) Safety glasses for undergraduates:

Laboratory instructors are responsible for requiring that students always follow the eye protection rule, and are fully authorized to expel non-compliant students for the remainder of the lab period.

(d.) Contact lenses:

Never wear contact lenses in a laboratory. Contact lenses do not offer eye protection – they **add to the injuries in case of an accident.** Even if safety glasses are worn with the lenses, eye injuries can result because of the lenses.

The biggest problem when wearing contact lenses is that normal tearing (weeping)

and washing with water are not effective in removing chemicals that have been splashed into the eye. The contact lens traps contaminants very efficiently and holds them against the eye surface. Hazardous vapours can also be caught and held behind the lens. Soft lenses are particularly bad because gases readily pass through the lens and dissolve in the eye's layer of moisture behind the lens.

Also, it is extremely difficult to remove a contact lens from an eye that contains foreign matter. Reflex squinting and blinking make it nearly impossible to remove the lens to facilitate better flushing.

(e). References:

Further information on eye protection can be obtained from the following sources:

(i) CRC Handbook on Laboratory Safety, Ed. N. V. Steere.

(ii) Catalogues from safety supply companies.

(iii) The internet.

2. Working Alone.

NO PERSON SHALL PERFORM CHEMICAL EXPERIMENTATION ALONE IN THE DEPARTMENT UNLESS A SECOND PERSON PRESENT IN THE DEPARTMENT IS AWARE OF HIS OR HER PRESENCE

Supervisors, also note WorkSafe BC regulation: "If you expect an employee to work alone, you must implement a written procedure for checking the well-being of a worker assigned to work alone or in isolation under conditions which present risk of disabling injury if the worker might not be able to secure assistance in the event of an injury or other misfortune."

(a.) Notification:

Research workers are required to notify others in the building that they are present and intend to work in the lab. If you have been so notified, you should inform the person when you leave the building. It is also strongly recommended that all personnel working after hours use the Campus Alone program. Contact Campus Security at 250-721-6683 and let them know who and where you are and when you plan to leave. Campus Security will make every effort to visit you while you are working, and if they don't receive a call advising of your departure they will follow up and check on you. For more details see: http://web.uvic.ca/security

(b.) Routine Work:

The rule against solitary work does not prohibit routine inspection, e.g. the servicing of vacuum lines with refrigerants, the checking of experiments with long reaction times. However, initiating operations or reaction sequences likely to be hazardous late in the day or at the end of the week should be strictly avoided.

(c.) Undergraduates:

An undergraduate may not undertake experimental work except in the presence or close supervision of a qualified laboratory instructor or research supervisor.

2. Smoking, Eating and Drinking

(a.) Smoking:

Smoking is forbidden in all campus buildings.

(b.) Food and Drinks:

The preparation and consumption of drinks and food in all laboratories and instrument rooms is forbidden.

All persons should recognize the potential poison hazard involved in eating and drinking in a laboratory. Numerous fatal accidents resulting from this practice are on record, particularly in labs where cyanides are in use.

Individuals who enter a lab with food or drinks must be asked to leave immediately.

3. Security.

(a.) Lock up:

Laboratories should be locked during evenings and on weekends to prevent the entry of unauthorized persons. **Propping open a door that has been locked is forbidden**.

(b.) Exterior Doors:

During such after hours periods, when you enter or leave the building, check to make sure

that the door locks behind you. If it does not, call Campus Security at 250-721-7599 and ask them to correct it. Again**, propping doors open is forbidden**.

c.) Unauthorized Persons: 

If you notice unknown people in the building after hours and on weekends, call 250-721-7599 (Campus Security) and describe the location and person(s) to them. The patrol officers will investigate and check the outside doors to ensure they are locked.

(d)Laboratory Procedures:

All lab procedures must be in writing. A checklist should be made of items that need checking before you close up the laboratory in the evening. This list should be signed and dated after completion of each check. Schedule work so that unattended experiments are kept to an absolute minimum. Before an experiment is left, precautions should be taken to prevent spills, floods or fires in case of mechanical power or water failure. Wire or clamp all condenser hoses B failure to do so may cause serious and extremely expensive damage to other facilities in the building. Whenever possible use a fume hood for reactions that must be left unattended.

4. Clothing: 

Wearing open-toed shoes in any laboratory is forbidden.

A lab coat *must* be worn at all times when you are working in a lab.

B. CHEMICAL MANAGEMENT

1. Laboratory Reagents.

(a.) Learn in advance the potential hazardous properties of all materials to be used. All individuals undertaking research should consult with the staff member in charge or with colleagues about the use of any potentially hazardous procedures or materials. Always consult the Safety Data Sheets for all chemicals that will be used.

(b.) Each member of a research group, at the time of leaving the laboratory or after finishing a particular project, shall:

- clean up his/her work area
- return any equipment no longer needed
- clear from the shelves, refrigerators etc. any used chemicals and reagents, disposing of or storing them as suitable.

(c.) Corrosive materials should be stored on chemically resistant rubber or plastic trays when it is necessary to keep them in refrigerators or on wooden benches.

(d.) Store corrosive materials (peroxide, bromine) and acids on a low shelf, never in an overhead position. Minimise the amount of corrosive materials (e.g. 3 litre bottles of acids) that you have on hand. Never store oxidising acids (nitric, sulphuric) in close proximity to flammable materials.

(e.) Separate storage should be provided for alkylating agents, carcinogens, etc., in ventilated compartments.

2**. Solvent Supplies**.

(a.) Minimise the accumulated volumes of flammable solvents that are kept on hand.

(b.) For research groups using large quantities of flammable solvents on a continuing basis, certified flammable storage cabinets must be used for storage. The amount of solvent stored should not exceed the rated capacity of the storage cabinet.

(c.) Avoid the practice of stockpiling small volumes of purified solvent that remain after a given research project- dispose of these in the waste solvent carboys.

(d.) Recognise that commercial refrigerators constitute a unique hazard in that explosions may occur when they are used for storage of volatile flammable materials. Volatile flammable materials may be stored in stoppered containers in "explosion proof flammable storage" refrigerators. Fridges which are *not* labelled “flammable storage” should contain only relatively non-volatile materials.

3. Waste Disposal.

Chemicals:

Disposal of all waste chemicals is handled through Occupational Health, Safety & Environment. Containers for collection of waste solvents, and other common wastes (see page following this section), are available from Stores. Full containers are collected by OHS every Thursday. All hazardous chemical wastes must be itemized on the online hazardous waste form, as follows:
(from https://www.uvic.ca/ohse/environment/waste/index.php)

Hazardous waste

- The hazardous waste management system is designed to deal with hazardous wastes on campus in an environmentally responsible manner; maintaining compliance with local regulations and demonstrating a best practices approach to environmental safety.
- Please complete the hazardous waste disposal form to request a pick-up of your hazardous waste.
- Pick-up is every Thursday, and requests must be in Wednesdays by 4:00 pm.
- To log-in to the system, use your Netlink Id and password.
- Please ensure that all waste containers have an appropriate label which identifies the contents (no symbols or abbreviations please).
- Each container should also have a neon green sticker attached: “Hazardous Waste For Pickup”. This will allow our waste contractors to identify containers that need to be removed. Extra stickers are available by contacting Occupational Health, Safety and Environment.
- For more information, please contact Amanda Muench at amuench@uvic.ca or 250-853-3915.

Non-chemical waste disposal:

- Sharps (needles, blades and small amounts of broken glass) must be placed in sharps containers, available from Science Stores, and then sent for disposal via the OHS hazardous waste program.

- Non-hazardous wastes should be physically separated, for removal by the maintenance staff, into the following types:

    1. Glass. (When reasonable, try to dispose of broken glass in the sharps containers.) For larger bottles use the central depositories in the Elliott and Bob Wright loading bays.
    2. Paper, tins and other miscellaneous inert materials.

4. Chemical Storage.

The Department recognises the need to store some frequently used chemicals essential to current projects in the working part of laboratories. At the same time seldom used items and chemicals no longer in active use should not be kept on a long-term basis in the laboratory area. It is the responsibility of research workers to control the amounts and diversity of chemicals in the working area.

The following facilities are provided to achieve these aims:

(a.) flammable storage cabinets - for actively used solvents and flammables;

(b.) under the fume hood compartmentalized storage - for acids, bases, lachrymators, active metals, hydrides and malodorous compounds;

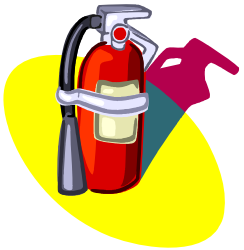
(c.) shelving - for general inorganics and organics.

(d.) chemical storage rooms are available for the labs in the Bob Wright Centre.

DO NOT store incompatible chemicals together (e.g. DO NOT store nitric or sulphuric acid with flammable materials).

Emergency Procedures

A. FIRE AND EXPLOSION



1. Extinguishers:

Each worker should be acquainted with (1) the location of the fire alarm boxes placed throughout the building, and (2) the location of each CO_2 and dry chemical extinguisher in the laboratory, and how the extinguishers are actually physically operated. Details of their applicability are in Appendix I. In particular, note the force of the pressurized CO_2 gas stream. It can cause extensive damage to research material and knock over flasks that further feed the flames. Several research workers here have successfully used sand or technical sodium bicarbonate to contain small fires in modestly flammable materials. Buckets of sand for use in extinguishing active metal fires are readily available in labs and laboratory corridors; other extinguishers should not be used for this purpose.

*****Call 250-721-7599 and 911 in the case of any fire.**

2. Major Fire:

In the case of a major explosion-initiated fire, evacuate the room, close the doors and sound the fire alarm immediately for building evacuation. **Then contact the Fire Department - call 911.**

3. Fires in Closed Rooms:

If the fire begins in a closed room or laboratory, **call 250-721-7599 and 911. Do not open the door** (an explosive release of gas and flame may occur when the door is opened. After ensuring that the Fire Department has been notified, sound the alarm and evacuate.

4. Hazards in Fires:

Fires in laboratories and storerooms will nearly always be accompanied by toxic gas. Self contained breathing apparatus is **NOT** available therefore **immediately call 911 and 250-721-7599 for assistance.**

5. Blanket and Safety showers:

Know the location of the nearest fire blanket or shower for extinguishing flaming clothing on yourself or a co-worker. Since speed in such instances is so essential, your laboratory coat should be used if you are close to the person. Alternatively, roll the individual on the floor to extinguish the flames.

B. TOXIC FUMES, GASES AND LIQUIDS

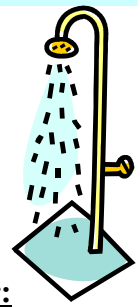
1. Evacuation:

If a release of a toxic or a noxious chemical (stench, respiratory effect, ammonia) occurs through gas escape or spill in an amount sufficient to cause a hazard, immediately vacate the room, closing the door. Call Campus Security, 7599, and evacuate the building.

2. Rescue:

In the case of an incident where a worker has been overcome by gas, **call 911 and 250-721-7599 (Campus Security) immediately.**

C. CORROSIVE CHEMICALS



1. Shower:

KNOW THE LOCATION OF THE NEAREST EMERGENCY SHOWER UNIT.

2. Water treatment:

The hazardous aspect of corrosive chemicals lies mainly in incidents where a high percentage of an individual's skin area is drenched, or when the face and eyes are affected. To avoid scarring or loss of sight the individual must be emergency showered at once. Continue to douse the individual with a stream of water during and after the removal of clothing.

3. Eye injuries:

Eye injuries particularly from caustic substances demand immediate, prolonged irrigation in an Emergency Eyewash/ Face wash. Hold the eyes open. DO NOT apply ointments, eye drops, or anything else – just water.

4. <u>Medical aid</u>:

Departmental policy is to seek immediately medical aid for extensive chemical burns while continuing the emergency treatment. Ask someone to call 911. The caller must clearly state the problem and the exact location.

5. <u>Cryogenic Materials:</u>

Liquid oxygen and nitrogen cause irreversible freezing burns to the eyes and skin. An individual suffering extensive exposure to these materials should be treated as a major accident case. Call 911 for an ambulance. **NOTE: ALWAYS WEAR GLASSES AND HOT/COLD PROTECTIVE GLOVES WHILE POURING LIQUID NITROGEN.**

6. <u>Spills:</u>

All labs have spill pads for small spills. Serious spills will require attendance by the Campus Security, telephone 250-721-7599. See also https://www.uvic.ca/ohse/assets/docs/spillresponseplan.pdf

D. SOURCES OF IONIZING RADIATION

1. <u>Radiation</u>:

The danger to departmental personnel from sources of ionizing radiation is normally minimal. However, anyone undertaking the use of isotopes or equipment producing ionizing radiation should be aware of their potential for harm and should seek further information from the University Radiation Protection Officer, local 250-721-8971.

2. <u>Dosimeters:</u>

Personal dosimeters are available and must be used by all personnel routinely involved in research involving ionizing radiation. If you are in doubt whether you need one, contact the Radiation Protection Officer or the Department Safety Officer.

E. ELECTROCUTION 

1. Rescue:

DO NOT TOUCH THE VICTIM UNTIL THE POWER IS CUT. Know where the power breaker is for your research or undergraduate laboratory area. In labs where the power cut-off is overhead, know where the pole is for breaking the switch. Store this pole in a visible, convenient location.

2. CPR:

After rescue, begin Cardio-Pulmonary Resuscitation if breathing has ceased. You cannot wait for assistance.

3. Ambulance and first aid:

Have another individual phone for an ambulance (911) and Campus Security (250-721-7599). The caller must clearly state the problem and the exact location.

LABEL AND SHIELD HIGH VOLTAGE EQUIPMENT

F. FIRST AID

1. Major accident:

In the case of a major accident resulting in severe physical injuries, extensive burns, exposure to toxic gas and in all cases where the subject has been rendered unconscious or is in a state of collapse, do the following:

- **Contact medical assistance: Immediately have someone else call 911 and 250-721-7599. The caller must clearly state the problem and the exact location.**

- **Proceed with Emergency First Aid:** Ensuring you and the victim are safe, take emergency first-aid action (A.B.C.: Airways, Breathing, Circulation; then stop the bleeding).

- Consider contacting Poison Control Centre, 9-250-595-9211 and UVic Health Services, 250-721-8492.

All UVic phones are labelled with emergency phone numbers – if yours is not, let office staff know immediately.

IT IS DEPARTMENTAL POLICY TO OBTAIN MEDICAL ASSISTANCE FOR ALL INJURIES AND MEDICAL EMERGENCIES.

2. First Aid Knowledge:

A knowledge of elementary general first aid is essential, particularly as it is related to common laboratory accidents. A convenient short summary is found in the C.R.C. Handbook on Safety, pages 19-30. Introductory first aid classes are held every September for new personnel. This training must be completed by all personnel planning to work as teaching assistants in the Department. Completion of additional first aid training is encouraged and will be paid for by the Department whenever possible.

3. First Aid Cabinets:

The laboratory first aid wall cabinet contains elementary first aid supplies. Replacement supplies can obtained from the General Office.

G. INCIDENT REPORT

The Department Incident and Hazard Report Form is found on the Occupational Health, Safety and Environment website https://www.uvic.ca/ohse/incident/index.php. WorkSafe BC regulations require that all incidents - no matter how minor - be reported to the Department within two days. Bear in mind no sanction is involved and that ensuing precautions might prevent a similar and more serious occurrence to a colleague performing the same operation.

Properties of Hazardous Materials

A. GENERAL

Workers should familiarize themselves with the hazardous properties of chemicals and reagents before use. Every lab should retain Safety Data Sheets for all hazardous materials used. There are many excellent sources of information on the internet, including UVic OHSE website, www.uvic.ca/ohse .

Remember that many potential accidents associated with synthetic work can be avoided by merely **cleaning up** glassware immediately after reactions are completed, thus not allowing harmless materials to be converted by air and time to hazardous chemicals .

B. SPECIFIC HAZARDS

1. Peroxides:

Many of the common laboratory solvents peroxidize readily. The following list is intended to be representative rather than exhaustive.

Ethers, e.g., Dioxane, Tetrahydrofuran, Ethylene glycol dimethyl ether (glyme), Diethylene glycol dimethyl ether (diglyme), Diethyl ether, Diisopropyl ether.

Hydrocarbons, e.g., Cyclohexene, Tetrahydronaphthalene (tetralin), Decalin, Branched-chain saturated hydrocarbons, Alkyl-substituted cycloaliphatics.

Alcohols: Some secondary alcohols, for example, isopropyl alcohol, can form peroxides.

Peroxidizable compounds are dated when received and as they leave Science Stores (Elliott). Periodic (6 monthly) inspection and peroxide testing is mandatory to ensure continued safety.

(a) Shield all distillations. Remember that peroxides frequently detonate after the distillation is complete.

(b) Never employ an air bleed during distillation of a peroxidizable material.

(c) Do not store peroxidizable solvents over long periods of time. Remember that peroxides form readily in poorly closed containers or even in well-closed containers if there is substantial air space above the solvent.

(d) Make it a practice always to test peroxidizable solvents for peroxide content B at least every 6 months. Date the last test.

(e) Become familiar with techniques for removing peroxides from solvents, and use them.

2. <u>Perchlorates and Perchloric Acid</u>:

Perchlorate salts and perchloric acid may cause violent explosions in the presence of oxidizable materials. In some cases transition metals appear to catalyze decomposition. Consult your research director before undertaking any reaction involving perchlorates, and, as a general policy, work with the smallest amounts feasible.

(a) The use of concentrated solutions of $HClO_4$ is restricted to the perchloric acid fumehood located on the roof of the Elliott Building. Follow posted instructions explicitly.

(b) Dilute $HClO_4$ may be used outside this hood provided that it is cold and handled over a stainless steel tray.

(c) Remember that $HClO_4$ is volatile and can be concentrated to dangerous levels in vacuum traps, especially if other solvents are also present in the trap.

3. <u>Gases</u>:

(a) <u>Pressurized Cylinders and Lines</u>

(i) All gas cylinders <u>must</u> be anchored by straps or chains. Each main cylinder valve must be closed when not in use. Cylinders should NOT be placed in areas of high traffic or beside desks.

(ii) When moving cylinders, the cylinders should be strapped to a properly designed wheeled cart to ensure stability. If cylinders fall, causing the valve stem to break, they become potential rockets. Cylinder caps should always be replaced when a cylinder is not connected to apparatus or is being moved.

(iii) A regulator should not be exchanged from cylinders of one type of gas to a cylinder of another type of gas. In particular <u>never</u> use an oxygen regulator with any other gas.

(iv) Do **NOT** cool carbon steel gas tanks with liquid nitrogen - they may explode.

(v) Remember at all times that vacuum lines can implode violently and avoid storing chemicals behind a working line. Exposed vacuum pumps must have belt guards.

(vi) Tape all Dewar flasks and vacuum desiccators to prevent violent shattering in case of breakage.

(b) Liquefied Gases

(i) Beware of condensation of oxygen from the air into liquid nitrogen and its subsequent concentration by loss of the nitrogen to form a highly oxidizing mixture.

Use liquid nitrogen only with high vacuum systems.

Do not use liquid nitrogen to cool tubes prior to sealing unless the tube is attached to a high vacuum line, otherwise air may condense in the tube and cause an explosion when the tube is brought to room temperature.

(ii) If a vacuum line develops a leak in the manifold while the trap is liquid nitrogen cooled, recognize that condensation of oxygen will occur in the trap. Do NOT isolate the trap or attempt to remove the Dewar flask, as the expanding oxygen will cause a pressure explosion of the trap.

(iii) Never seal a reaction vessel under argon gas at liquid nitrogen temperature. Argon will condense at this temperature, leading to violent explosions as the liquid argon converts back to gas on warming.

APPENDIX I

SAFETY EQUIPMENT

1. FIRE EXTINGUISHERS

The following are available in or near each laboratory:

(a) CO_2 Extinguishers: Applicable to flammable liquid and minor electrical fires (Note: Water is preferable for paper fires in waste baskets, wood, cloth, etc.) Do not direct the CO_2 near a person's face. Do not use either CO_2 or water on sodium, potassium or lithium metal fires.

(b) All-purpose Dry Chemical: Applicable to all classes of fires (ABC), except those caused by active metals. A heavy clean-up problem makes sand, sodium bicarbonate or CO_2 preferable for small fires. Do not use on electronic equipment as it will be destroyed.

(c) Bucket of Sand: Use for fires caused by active metals and to contain small fires in modestly flammable materials.

N.B. Report all uses of fire extinguishers, however minor, to the Admin Officer to arrange for a replacement. A partially used extinguisher may leak, creating danger for the next worker who needs it.

2. SAFETY STATION

Each research and teaching laboratory, service area and instrument room where active chemical experimentation is undertaken contains the following equipment at a location designated as the "Safety Station".

(a) Emergency Shower and Eyewash Fountain: The showers provide continuous water flow for as long as the chain/handle is pulled down. After use, contact Facilities Management for clean-up assistance. The eyewash fountain is hand- or foot-operated. As routine, research workers are asked to flush the eyewash fountains at intervals of several days to clear rust from stagnant lines.

(b) First Aid kit: The following items are stocked in each first aid kit:

1 First Aid manual	1 pair scissors (sharp, blunt end)
1 pkg safety pins	1 pkg cotton-tip applicators (sterile)
2 each triangular bandages	1 pkg assorted plastic strips (bandaids)
2 each Tensor bandages	1 roll 2" x 5 yds adhesive tape
1 roll 1" x 5 yds adhesive tape	1 box 2" x 3" sterile pads (Telfa)
1 roll 1" gauze bandage	1 roll 2" gauze bandage
3 each large pressure dressings	3 each small pressure dressings

NOTE: Be sure to replace anything that is used. Supplies are available

from the Chemistry General Office.

(c) Emergency Power Cut-Off: Know where the emergency cut-off is for your lab. For labs where the cut-off is in the ceiling, a stick for operating the lever must be at the safety station or circuit panel.

(d) Gas and Water Cut-Off: Know where the natural gas and water are shut off in your laboratory.

3. SPILL KITS

For small (1 L or less) solvent, acid or base spills, Spill Kits are available at no charge from Science Stores.

4. LOCATION OF SAFETY EQUIPMENT

As soon as you have settled into your laboratory area, you should find the locations of specific safety equipment which you may need in an emergency. This includes safety shower, fire extinguishers, fire blanket, first aid kit, spills trolley, and so on. Know where to find the emergency telephone numbers and the nearest fire alarm pull station. Plans showing the location of safety equipment are posted strategically around the buildings.

5. SCIENCE STORES

Science Stores stocks many safety items for personal protection and supplies for safe working practices.

APPENDIX II

EMERGENCY EVACUATION OF THE CHEMISTRY DEPARTMENT

On hearing the building FIRE ALARM all individuals are required to vacate the building immediately. Experimenters should secure apparatus sufficiently to prevent secondary fire or gas hazards from developing, and close windows and doors (do not lock doors). Emergency Floor Coordinators should proceed as noted below. The local fire department has approved the departure routes listed below.

If conditions permit, each Emergency Floor Coordinator should carry out the following procedures on hearing the building alarm:

i) Ensure that all persons have evacuated the rooms assigned to his or her exit (see below).

ii) Close hallway doors of the rooms assigned to his or her exit.

iii) Close the fire doors at the exits to the area under his or her control.

In the case of a fire in his or her assigned area, a floor coordinator should ensure that the alarm has been transmitted to the local fire department (911) or to the University switchboard. Bear in mind that the attempted rescue of persons in chemistry laboratories may be extremely dangerous and may require an independent air supply respirator - contact 911 and 250-721-7599.

Emergency Coordinators should, upon arrival of the fire department, advise the senior officer present of any relevant problems within their area of concern.

RECOMMENDED EXITS
DO NOT USE THE ELEVATOR

The local fire department has approved the departure routes listed below:

1. ELLIOTT OFFICE WING STAIRCASE (East [parking lot] end of office wing)

Rm(s):	Description:
301-321	offices
038-045	offices and labs

2. ELLIOTT CENTRAL STAIRCASE (leading to front/main entrance of building)

Rm(s):	Description
418-419	labs
401-403	lounge
322-328	labs, study areas,
344-349	labs
227-232	labs, instrument shop

3. ELLIOTT LABORATORY WING STAIRCASE: (South end of lab wing)

Rm(s):	Description
330-343c	labs, offices

234-255	offices, labs
017-020	labs & shops

4. ELLIOTT LECTURE WING WEST EXIT:

Rm(s):	**Description:**
066, 066a-d	labs
165, 166	offices

5. PETCH EAST STAIRCASE: (East side of Petch building)

Rm(s):	**Description:**
272/5/6	labs, offices
091	machine shop

6. PETCH CENTRAL STAIRCASE: (North side of Petch building)

Rm(s)	**Description**
057-059	Labs, offices
068-071	Labs, offices

7. WRIGHT - STAIR 3 (West end of B-wing):

213 – 216a	Labs, offices, instrument rooms
317 – 317c	Lab, office

8. **WRIGHT – STAIR 1 (Main staircase):**

209 – 211a	Labs, offices

Permission to re-enter the building after an evacuation may be given by THE FIRE DEPARTMENT ONLY.

APPENDIX IV

DIRECTORY OF SAFETY-RELATED AGENCIES AND PERSONNEL

The following agencies and personnel may be useful in obtaining help or information on safety-related matters. Also, do not forget the emergency numbers below the emergency telephones on the second and third floor landings, and affixed to your telephone set.

- **Ambulance/ Fire/ Police** **911**
- **Campus Security** **250-721-7599**

- Department Safety Officer 250-721-7184
- Department Chair 250-721-7150
- Department Administrative Officer 250-721-7153
- Poison Control Centre 9-250-595-9211
- UVic Health Services 250-721-8492
- UVic Occupational Health, Safety and Environment 250-721-8971