

Department of Psychology

Faculty of Science
The University of Auckland

Safety Manual

Contents

Section 1: Dealing with an Emergency

Important Phone Numbers	4
Wardens & First Aiders	5
Fire	6
Accidents & Injuries	7

Section 2: Accident Prevention and Safety Guidelines

Security	9
Departmental Safety Procedures	12
Staff Responsibilities & Office Safety	13
Computer Safety	14
Manual Handling (Lifting & Carrying)	15
Chemical Safety	16
Field Trips	19
Mechanical Workshop	21
Electrical Workshop	24
Pigeon Housing Area	26
Appendices	28

The information in this Safety Manual is not intended to be a complete guide on safety matters, but to provide the most important outline of the recommended Faculty-wide safety practices and the Department-specific safety procedures. For further detail please consult the Faculty of Science Safety Manual or the University of Auckland Health and Safety Manual (Available from the Office – Room HSB 660).

Section 1

Dealing With An Emergency

Important Phone Numbers

Emergency	111 <i>(dial 1 for outside line from University phone)</i>
Campus Security 24/7	Ext 966 or Ext 85000
Student Health (City)	Ext 87681
Student Health (Tamaki)	Ext 86677
Police (routine call – City Campus)	379-4240
Police (Tamaki)	525-7179
National Poisons Centre - URGENT CALLS (On-call 24 hours a day)	(03) 474 0999
National Poisons Centre – general information	(03) 479 1200

Department of Psychology Wardens Tamaki Campus

Name	Level	Phone	Area	Room
Sue O'Shea	3	86886	Level 3 Bld 721	321
Marijke Oed		86852	Level 3 Bld 721	321
Academic Staff	2		Level 3 Bld 721	222
Nigel George	2	85267	Bld 731 (Clinic)	
S&ES Staff	3		Bld 734	
S&ES Staff	2		Bld 734	
Christine McGuffog	1	89251	Bld 730 (PHB)	147

Department of Psychology Wardens – City Campus HSB & Tamaki Floor Warden Duties Outlined in Appendix A

Name	Level	Phone	Area	Room
Rajni Herman	6	88413	West Corridor	660
Shannon Johnson	6	88557	East Corridor	660
Larissa Isted	5	88554	West Corridor	536
	3	88433	Lecture Theatres	324
Peter Johnson	3	88938	Central Corridor	322C
Mick Sibley	3	88482	East Corridor	328

Department of Psychology First Aiders First Aid Procedures Outlined in Appendix A

Name	Level	Phone	Room
Jane Buckman	6	87483	652
Peter Johnson	3	88938	322A
Sue O'Shea	Tamaki	86886	Bld 721 321

Fire

In The Event Of Fire

1. Go to the nearest fire alarm
2. Break the glass with your shoe or other instrument, but not with your hand or elbow
3. Pull the switch down
4. **Dial (1)111**, and ask for Fire
5. Tell them where the fire is; e.g., **We are in the Human Sciences Building at the University of Auckland, and we are on the sixth floor or Tamaki Campus Bld Number Morrin Road**
6. Leave the building

Identification of Suitable Fire Extinguishers

Fire extinguishers are located in many locations around the Department. In particular, they can be found at the end of corridors and mid-way along corridors. It is important that staff note the location of fire extinguishers in the vicinity of their own work areas.

For Electrical Fires, Spirit Fires, Or Oil Fires

Green Triangle Surrounded with Red & White Stripes

For Timber Fires, Paper Fires, Or Textile Fires

White Triangle Surrounded with Red & White Stripes

Accidents & Injuries

Injuries

For **minor** injuries during normal working hours, contact First Aid people in the Department:

- Jane Buckman
- Peter Johnson
- Sue O'Shea (Tamaki Campus)

(room and contact details on page 4)

Alternatively a Doctor is available at Student Health (City, ext: 87681; Tamaki, ext: 86677, or Medical School, ext: 86962)

When dealing with a **serious** injury contact the Ambulance or Fire Service by **dialling (1)111**

Action Priorities!

Remember the **ACTION** priorities:

Safety: for yourself, the casualty, and bystanders

ABC: Airway - Breathing – Circulation
Bleeding

Level of consciousness

Reporting Accidents And Incidents

Report **each** accident to the Safety Officer

Record all accidents in the Accident Register (Available In Office)

Note: *when a hazardous or potentially hazardous situation occurs, even though there may be no injury, the facts should be reported and recorded. This is to enable an investigation to be carried out and procedures set in place to prevent such an incident recurring. Remember, an incident may become an accident.*

Section 2

Accident Prevention

and Safety Guidelines

General Security

Security officers are on duty 24 hours a day and can be contacted on Ext 85000. Please report defects, which affect security, such as broken windows, without delay to the Senior Security Officer (ext. 85000). Tamaki campus Security office ext 85225.

Keys and Card Access

Keys (for offices and laboratories) and swipe cards (for building access) are issued by the Department Office. These keys will only be issued with the permission of the Head of Department.

If theft of any kind occurs, it is your responsibility to inform: Head of Department, Security, and the Police.

Identification Cards

All staff and students are issued with a University identification card, which must be carried at all times and presented, if requested, to authorised personnel. ID cards are essential for security, for use in the library, and for recreation centre membership. Lost or stolen cards should be reported immediately to the ID Card Centre, ext 85103 and Department Manager.

Security of Department

- Lock doors to laboratories and private rooms whenever possible and not in use.
Note: If staff leave an office, even for a short period of time, it should be locked. Many thefts are on the spur of the moment where an office door is left open.
- Lock away in secure cupboards all equipment not in immediate use that is likely to be attractive to thieves and
- Report strangers snooping around the Department to the Security Staff (ext 85000) Tamaki 85225.
- Put your money (purses and wallets) away.
- Do not leave money in a desk drawer or under a counter.
- Report all incidents of theft or vandalism to the Security Office (ext 85000 and the Head of Department (and in case of theft, the Police).
- Notify the Security Office that you are in the building during a holiday.

Unisafe Security Officers

Extension: 85000

- Ensure that your telephone has a yellow sticker on it, which gives emergency telephone details.
- You should also have next to or near your telephone, the Faculty of Science Emergency Procedures flip chart.

Working Alone Or Late

- Avoid working alone if possible.
- Let someone (a colleague or on-duty officer) know where you are and also let them know when you are leaving work.
- Arrange for someone to stay with you or check up on you at set times.
- Lock the door of your office/laboratory when you are working alone. Lock the outside door of the floor so that only key-holders may enter.
- If you are staying late, tell people at home.
- Have someone escort you to your car or bus stop – Campus Security will arrange this if you give them reasonable notice.

Responsibilities

- Do something about anything suspicious you observe.
- If you see someone acting suspiciously at any time (particularly late at night) first ensure your safety.
- Phone (1)111 if there is emergency, if you observe anything serious, urgent, or violent happening, or if you can't get through on the normal police number. Give the details of the situation and the address!
- For routine police calls phone 1-379-4240 (City) or 1-525-7179 (Tamaki). The police station will treat calls in order of priority of urgency, so be specific and say exactly what is happening.
- Phone Campus Security (ext 85000) to report a current or past event. It is important that you fill out an Incident Report Form for every incident that occurs (available from University Control Room).

Car Parks

- Park close to exits if you have to retrieve your car at night
- Park your car in the most visible, well-lit place available
- Go with someone else to your car, or ask Campus Security to escort you.
- Do not use lifts.
- Keep to the illuminated areas.
- Carry keys between knuckles.

Theft/Robbery/ Suspicious Behaviour

- Don't leave valuables in view.
- OBSERVE! Be aware of your surroundings.
- REMAIN CALM when you observe something suspicious.
- If at any time you feel unsafe, call Campus Security (ext 85000)

Department Safety Procedures

Reporting

The Department of Psychology Technical Services Committee (TSC) reports to the Head of Department.

The Head of Department is responsible for safety generally through delegation to the Department Manager.

Members TSC

- Jane Buckman (Chair)
- IT Manager
- Technical Staff
- Appointed Academic Staff representative

Terms of Reference

Record and investigate all accidents.

Arrange for training in the safe use of equipment.

Determine procedures for notifying appropriate persons of serious accidents and securing the area.

Develop procedures for dealing with emergencies.

Produce safety manuals.

Staff Responsibilities & Office Safety

Responsibilities

All members of the Department must ensure that they are working in a safe and non-hazardous environment. Most precautions can be easily taken and it is up to each individual to identify hazards, to correct them if possible, or to refer the problem to the Head of Department for remedial action.

It is the responsibility of all individuals to take whatever safety measures are available to ensure their working environment is at all times safe for themselves and for anyone else working in the vicinity.

The following guidelines should be read in conjunction with the more detailed guidelines provided in the appendix.

The following guidelines should be read in conjunction with the Safety Guidelines for the Office and Laboratory (Appendix C).

Guidelines

- Maintain clear working spaces, keeping aisles and stairways clear of obstacles.
- Avoid stringing electrical cords across areas where a tripping hazard may be created.
- Tape cords to the ground when they cross open spaces.
- Carefully stack overhead storage areas, if used, to avoid items falling when doors are opened.
- Do not leave filing cabinets and drawers open.
- Open only one drawer of a filing cabinet at a time – two open could topple the cabinet.
- Do not use desks and chairs as substitutes for ladders.
- Store scissors, razor blades, and other sharp instruments separately from other office equipment.
- Switch off electrical equipment on completion of the day's work. Withdraw plugs where applicable.
- Appliances must be inspected in accordance with Electrical Code of Practice regulations.

Computer Safety

The following injury prevention guidelines should be read in conjunction with the Safety Guidelines for Computer Use (Appendix C).

Injury Prevention

1. All staff who use a computer as a significant part of their work should attend a OOS workshop run by CPD (ext. 88140/7231).
2. Report any aches, pains, or discomfort. Have your workstation and workload investigated so that appropriate action can be taken.
3. Task variety is essential to prevent static postures for prolonged periods. Where this is impractical it is imperative that micro pauses be used every 10 minutes or so and that there be a 10 minute break from computer.
4. Avoid excessive computer workload, as it does not allow time for muscles to recover.

Manual Handling (Lifting And Carrying)

The following guidelines should be read in conjunction with the Safety Guidelines for Manual Handling (Appendix C).

Factors Affecting Safety

The **weight** of the object and the strength of the lifter

- Take care when lifting any heavy objects.
- Consider assistance when lifting objects heavier than 20 kg (personal or mechanical).
- Over 30 kg get assistance.
- Do not attempt to lift or move objects that are beyond your natural strength.

The **size and shape** of the object

- Your vision must not be obscured when carrying it.
- You must be able to get a firm grip on the object.
- There should be no danger of overbalancing whilst carrying the object.
- Beware of sharp edges that could cut into your hands or impale others.

The **position** of the object

- The best side for lifting may not be the one facing you
- Do not retrieve or place heavy objects above shoulder height without assistance
- Do not retrieve or place heavy objects below your standing surface without assistance

The **path and distance** the object is to be moved

- Ensure the pathway is clear of all obstructions and trip hazards and that the load can pass through any doorways or openings
- Beware and if possible avoid steps and stairs.

Chemical Safety

The Department has three Chemical Managers whose responsibility it is to ensure that all University & Department Policy and Guidelines on the Acquisition, Storage, and Use of Chemicals are adhered to. Each manager has primary responsibility for a specific location in the Department. Enquiries about issues to do with the safe use of chemicals should be directed to the Manager closest to your area. All use of chemicals, outside of the areas specifically identified for chemical use, should also be reported to the department Safety Officer or Department Manager.

Manager	Phone	Area
Peter Johnson	88938	Electrical & Mechanical Workshops
Mick Sibley	88482	Animal Treatment and Housing Areas
Vanessa Lim	88430	Electroencephalography (EEG) Facility

The following guidelines should be read in conjunction with the Official Policy on the Management of Chemicals and the Small Scale Use of Chemicals (Appendix B) as well as the Safety Guidelines for Chemical Use (Appendix C).

Guidelines

- Clearly label name of the chemical.
- List hazards.
- Store in clean containers with appropriate seals immediately after use, and in an appropriate place.
- Keep to minimum when being used experimentally.
- Leave as few as possible on benches.
- Keep out of direct sunlight to avoid sharp increases in temperature.
- Store on shelves below shoulder level.
- Open carefully after normal storage because pressure build-up can occur with some chemicals.

What To Do In An Emergency

	Skin Contact	Eye Contact	Inhalation	Ingestion
Acetone	Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.	Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.	Aspiration hazard. If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE . If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Call a physician immediately.
Alcohol	Immediately flush skin with plenty of water for at least 15 minutes. Call a physician if irritation develops.	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficulty, give oxygen. Call a physician.	Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.
Ammonia	Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.	Immediately flush eyes with plenty of water for at least 15 minutes lifting lower and upper eyelids occasionally. Get medical attention immediately.	Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. Get medical attention.	Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.
Bleach	Remove contaminated clothing.	Flush with water for at least 15 minutes. If irritation persists, obtain medical attention.	Remove to fresh air.	Drink glass full of water and call a physician.
CRC	Wash with water.	Flush with large amounts of water.	Move to fresh air. Apply artificial respiration if necessary.	Induce vomiting. Call a physician.
Ethylene Glycol-bis	Flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.	Flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.	Remove to fresh air. If breathing becomes difficult, call a physician.	Wash out mouth with water provided person is conscious. Call a physician.

	Skin Contact	Eye Contact	Inhalation	Ingestion
Hydrogen Peroxide	Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.	Not expected to require first aid measures.	Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.
Paint	Wash with soap and water.	Flush thoroughly with water. Call a physician.	Remove to fresh air. Get medical help for any breathing difficulty.	Drink 1 or 2 glasses of water to dilute. Do NOT induce vomiting. Call physician.

Field Trips

The following guidelines should be read in conjunction with the Official Policy on Field Trips (Appendix B) as well as the Safety Guidelines for Field Trips (Appendix C).

Purpose: To ensure the safety of all persons engaged in field activity, where that activity involves travel to and from a destination away from campus.

Scope of Activities: Field trips are broadly defined as any activity that takes a member of staff, or a student, off site in the pursuit of university-related activities.

HoD Responsibilities: All field trips must be approved by the Head of Department, who must be satisfied that appropriate steps have been taken to ensure the safety of staff and students who are involved.

Accident Reporting: All accidents and injuries occurring in the field must be reported to the supervisor and to the Department Safety Officer, and an accident/incident report completed at the Department Office.

Preparedness: The supervisor is to ensure that appropriate action can be taken in the event of injury or other emergency. They must ensure the well being of all others on the trip, obtain any necessary assistance, and make contact with the relevant personal or aid authorities.

Preparedness may include any or all of the following, depending on the type of activity:

1. The supervisor should know the whereabouts of the local emergency and support agencies such as police, ambulance.
2. An emergency contact should be available at all times so immediate contact can be made in an emergency.
3. The names, and contact phone numbers of all group members should be known by the contact person along with full details of the location of the activity and methods of travel.
4. Escape plans should be formulated during the activity planning stage to allow withdrawal of the group or individuals in the event of injury, illness, or threat of injury.

Medical Awareness: The supervisor is to be aware of any special medical conditions relating to party members, and any specific medications or treatments for those conditions.

First Aid: Organisers of field trips are to assess whether a fully qualified first aider is to be included in the group.

Vehicles: University vehicles to be used on field activity are only to be driven by staff with the licence classification appropriate for the type of vehicle and number of passengers. No alcohol or drugs are to be consumed while the driver is in control of the vehicle. Students may not drive University vehicles. If students or staff drive private vehicles then the vehicle must be warranted and safe for the purpose it is intended to be used. Again, the driver must have the appropriate licence classification for the type of vehicle and number of passengers. No alcohol or drugs are to be consumed while the driver is in control of the vehicle.

General: *These guidelines are intended for the usual field trips encountered within the Department. More extensive trips, to remote areas, in substantial groups, or for specialised purposes, will need to seek further safety recommendations from the Department Safety Officer.*

Mechanical Workshop (HSB 324)

General Information

The Mechanical Workshop is an area that contains numerous hazards. For this reason staff should not enter the mechanical workshop unless it is absolutely necessary. Staff, other than the Mechanical Workshop Technician, are not permitted to use the equipment in the workshop. In addition, if the Mechanical Workshop Technician is using any of the items identified with a "*" in the table below, a second person must be present in the workshop.

The following table indicates specific equipment, located (or stored) in the Mechanical Workshop, which is of a clearly hazardous nature.

	Hazardous Equipment
*	Milling Machine
*	Lathe
*	Sheet Metal Folding Machine
*	Sheet Metal Guillotine
*	Fly Press
	Drill Press
	Grinding Machine
	Arc Welder
	Gas Welder
*	Band Saw
*	Bench Saw
	Wood Shaping Machine
	Sanding Machine
*	Planing Machine
	Electric Hand Tools

All Compressed Gas Cylinders Are To Be Stored In The Mechanical Workshop

- All users of gas cylinders must know and understand the properties of a gas before using it and must establish plans to deal with any emergency situation that might arise during use.
- The number of cylinders in a workshop must be kept to a minimum to minimise the fire and toxic risk, and empty cylinders should be kept to a minimum.
- For further details regarding handling and safety precautions please refer to University Health and Safety Manual (available from the Office).

Simplified Protocols

The following protocols are a simplified guideline only.

Mechanical Workshop Technician Responsibility

Ensure the workshop equipment is fitted with appropriate safety devices. These must not be removed.

Ensure that all safety equipment is in position before operating machinery.

Defective equipment must be shut down *immediately*, and left so until repaired. Defective equipment must be reported to the Chair of the Technical and Computing Services Committee.

Equipment must be stationary and switched off before changing tools.

Workshop must be kept in a clean and tidy condition.

Replace tools and equipment immediately after use.

Tools are not to be “stored” on the machine bed while the machine is running.

Store nothing on the floor where a tripping hazard may

occur.

Clean up any spillages immediately.

All situations that *might* cause an accident must be reported to the Safety Officer.

Report all accidents, or potential accidents, to the Head of Department through the Safety Officer.

Use personal safety equipment when applicable.

Wear appropriate eye and ear protection when using equipment.

Keep hand tools in good condition.

Control Documents

The simplified protocols above are for general guidance only. The following control documents, that can be found in the Appendices to this manual, should be consulted and adhered to when establishing tasks and processes in the Mechanical Workshop:

Policies (Appendix B)

1. Equipment Design, Modification, Repair, and Commissioning
2. The Management of Chemicals
3. The Small Scale Use of Chemicals

Safety Guidelines (Appendix C)

1. Workshops
2. Compressed Gas Cylinders
3. Electricity
4. Manual Handling (Lifting & Carrying)
5. Chemicals

Electrical Workshop (HSB 322)

General Information

The Electrical Workshop is, by the very nature of the activity undertaken there, a hazardous area. The workshop is generally safe for staff to enter for the purposes of meeting with the technicians. However, staff must never touch any of the materials or equipment that is in the workshop. It is not possible to identify live circuits by visual inspection!

Simplified Protocols

The following protocols are a simplified guideline only.

Electrical Workshop Technician Responsibility

Defective test equipment must be shut down *immediately*, and left so until repaired. Defective equipment must be reported to the Chair of the Technical and Computing Services Committee.

Workshop must be kept in a clean and tidy condition.

Store nothing on the floor where a tripping hazard may occur.

Clean up any spillages immediately.

All situations that *might* cause an accident must be reported to the Safety Officer.

Report all accidents, or potential accidents, to the Head of Department through the Safety Officer.

Use personal safety equipment when applicable.

Control Documents

The simplified protocols above are for general guidance only. The following control documents, that can be found in the Appendices to this manual, should be consulted and adhered to when establishing tasks and processes in the Electrical Workshop:

Policies (Appendix B)

1. Equipment Design, Modification, Repair, and Commissioning
2. The Management of Chemicals
3. The Small Scale Use of Chemicals

Safety Guidelines (Appendix C)

1. Workshops
2. Computers
3. Electricity
4. Manual Handling (Lifting & Carrying)
5. Chemicals

Pigeon Housing Areas (HSB 318 & 329)

General Information

The Pigeon Housing Areas are hazardous areas because of the risk of infection via airborne pigeon dust. Only authorized individuals may enter these areas, and when they do so they must take the precautions set out in this section.

Simplified Protocols

The following protocols are a simplified guideline only.

Animal Technician Responsibility

Always wear a dust mask when in the Pigeon Housing Areas.

Minimise the amount of dust in the Pigeon Housing Areas by cleaning regularly.

Minimise the amount of time spent in the Pigeon Housing Areas.

Areas must be kept in a clean and tidy condition.

Clean up any spillages immediately.

All situations that *might* cause an accident must be reported to the Safety Officer.

Report all accidents, or potential accidents, to the Head of Department through the Safety Officer.

Inform medical personal of your involvement with birds and outline the possibility of infection to them.

Have a medical check-up on an annual basis for the specific purpose of screening for infection.

Control Documents

The simplified protocols above are for general guidance only. The following control documents, that can be found in the Appendices to this manual, should be consulted and adhered to when establishing tasks and processes in the Pigeon Housing Areas:

Policies (Appendix B)

2. The Management of Chemicals
3. The Small Scale Use of Chemicals

Safety Guidelines (Appendix C)

1. Laboratories
2. Laboratory Animals
3. Electricity
4. Manual Handling (Lifting & Carrying)
5. Chemicals

General Advice to Users of the Pigeon Housing Areas

Various authorised staff and students use these areas. It is strongly recommended that anyone who uses these areas be informed of the possible risk of infection. All staff who use these areas regularly are advised to inform their medical practitioner of this activity, and to inform their medical practitioner of the potential risk of infection. Do not assume that your medical practitioner is familiar with this form of infection. In addition, it is the responsibility of a student's supervisor to inform the student of the minimal risks that they undertake in entering these areas, and advise them to wear dust masks as a precautionary measure.

Appendices

The appendices to this safety manual contain information that is most pertinent to the activities commonly undertaken in this Department. All staff and students should adhere to these guidelines and policies. Information relating to less frequent activities may not be found in these appendices. Staff and students are advised to read the Faculty of Science Safety Manual and the University of Auckland Health and Safety Manual to ensure that they are adhering to University policy and guidelines in these activities. If no guidance can be found in these publications then the Department Safety Officer should be consulted.

Appendix A

Floor Warden Duties
First Aid Guidelines

Appendix B – University Policies

Field Trips
Equipment Design, Modification, Repair, and Commissioning
The Management of Chemicals
The Small Scale Use of Chemicals

Appendix C – Safety Guidelines

Office Work
Computers
Laboratories
Laboratory Animals
Fieldwork
Manual Handling (Lifting and Carrying)
Workshops
Compressed Gas Cylinders
Electricity
Chemicals

APPENDIX A

FLOOR WARDEN DUTIES

1. Put on your RED vest.
2. Assist all occupants in your area/zone to leave the building by the nearest safe exit.
3. Ensure smoke control doors are closed.
4. Check toilets etc.
5. Ensure critical appliances and systems are turned off if it is safe to do so.
6. Watch for people with disabilities who may require assistance. Appoint a suitable person to assist as necessary.
7. Note the location of any persons remaining inside the building.
8. Report to the Building Warden at the fire alarm panel or front entrance indicating your area/zone is clear or occupied. Eg. Location of any persons fire fighting or location of persons with disabilities.
9. Only if it is safe to do so should fire fighting be attempted.

BUILDING WARDEN DUTIES

1. Put on your YELLOW vest and ensure you have your copy of the evacuation scheme and the disability register.
2. Call the Fire Service on 111, and Unisafe on 5000. Clearly state the name and address of the building and the nature of the emergency.
3. Report to the fire alarm panel or front entry of the building.
4. Await reports from the Floor Wardens.
5. Initiate action if no report is received from any wardens.
6. Appoint a suitable person to assist persons with disabilities as necessary.
7. Advise the Fire Service, on their arrival, of the evacuation status, including the location on any persons still in the building.

IF YOU DISCOVER A FIRE

1. Raise the alarm immediately by operating the nearest fire alarm.
2. Ensure the Fire Service is notified per 111 call.
Clearly state the NAME AND ADDRESS OF THE BUILDING (including Central Business District, Auckland), and the NATURE OF THE EMERGENCY.
3. Close down potentially dangerous equipment or processes. Leave lights on.
4. Leave immediately by the NEAREST safe exit route. Move quickly but DO NOT RUN.
5. Do not use lifts.
6. Report to the designated evacuation point.
7. Stay outside the building until the "all clear" is given.
8. Only if it is safe to do so should fire fighting be attempted.

First Aid

First Aid is the initial care of someone who has been injured, or becomes suddenly ill. Some injuries and illnesses are minor, and need little or no special care. Others may be life threatening, and the right treatment can mean the difference between life and death, or permanent disablement.

First aid does work. It is based on sound modern medical practices.

The goals of first aid are:

1. to sustain life
2. to prevent the illness or injury from becoming worse
3. to promote recovery

The essential processes in first aid are:

1. **SRABC** - Safety, Response, Airway, Breathing, Circulation
2. Controlling bleeding
3. Treating shock
4. Staying with and observing an unconscious patient
5. Getting appropriate medical care for the casualty as soon as possible

SAFETY

- As a first aider your first action **MUST** be to check the area is safe!
- Check for dangers to yourself, other people at the scene, and the casualty.
- You can't help anyone if you injure yourself.
- If there is danger present, **DO NOT PROCEED** any further, even though it 'seems right to do so'. Wait until emergency assistance arrives.
- Only move the casualty if necessary.

RESPONSE

- Check for **RESPONSE**: shake gently and shout. If conscious, check for other injuries.

AIRWAY

- If unconscious turn on side and check **AIRWAY**.
- Clear any loose material in mouth.

BREATHING

- Check for **BREATHING**. Look for chest rise and fall; listen for breath sounds; feel for breath on the cheek or hand.
- IF **NO** breathing, roll casualty on back. Tilt head and lift jaw to open airway. Seal nose, cover mouth, give five quick breaths.
- IF **THERE IS** breathing, put casualty in stable side position and check for other injuries.

CIRCULATION

- Check for **CIRCULATION**: feel for carotid pulse in groove beside Adam's apple.
- IF **THERE IS A PULSE**, continue **EAR** (mouth to mouth breathing) at 12 to 15 breaths per minute (adult) or 20 per minute (child or infant) until casualty starts breathing or help arrives. Check pulse regularly to make sure it is still there.
- Full breaths for adult, blow gently for child, puff lightly for infant.
- IF **NO PULSE**, start **CPR** (cardiopulmonary resuscitation), or call for help if you do not have this skill.

CPR RATE:

1. 15 compressions, 2 breaths = 1 cycle.
2. Do 4 cycles each minute for an adult, 6 cycles each minute for a child or infant.
Press on lower half of breast bone.

COMPRESSION DEPTH:

1. Adult: 5 cm, using two hands.
2. Child (age 1 to 8 years): 2-3 cm, using heel of one hand.
3. Infant (age to 12 months): 1-2cm, using two fingers only.

APPENDIX B

Field Trips

POLICY

Field trips are to be planned and undertaken in accordance with this policy.

Purpose

To ensure the safety of all persons engaged in field activity, where that activity involves travel to and from a destination away from campus.

Scope

Field activities vary in their nature and duration, and are difficult to categorise, however this policy is intended to provide guidelines for compliance with the requirements of the Health and Safety in Employment Act, 1992.

Applicable Legislation

Health and Safety in Employment Act, 1992

Procedure

It is not possible to cover all situations in this policy, however organisers and supervisors must assess any field activity in light of this policy and if necessary develop more specific detailed procedures, which must be documented and promulgated extensively.

Approval of Field Activities – The Head of Department is to approve the field activity and must ensure that adequate consideration is given to aspects of health and safety. The responsibility for safe conduct of the activity rests with the designated supervisor.

Accident Reporting – All accidents and injuries occurring in the field must be reported to the activity supervisor and an accident/incident report completed.

Alcohol and Drugs – All persons engaged in field activities have a responsibility to ensure that they are not, through the consumption of alcohol or drug, in a state that may endanger themselves or any other person.

After Hours – The safety of students “after hours” can only be determined by assessing the circumstances in each situation. Supervisors are to be aware that there is a significantly greater responsibility in remote or isolated areas than when in a built up area. In some circumstances it may be advisable for students not to leave the campsite.

Emergency Procedures – The supervisor of the field activity is to ensure that correct and immediate action can be taken in the event of injury or other unforeseen emergency. They must ensure the well-being of the rest of the group, obtain any necessary assistance and make contact with the relevant personal or aid authorities.

Organisers of field activities - Plan strategies for dealing with emergencies. The following may act as a guide:

- The supervisor should know the whereabouts of the local emergency and support agencies such as police, ambulance, Department of Conservation and Mountain Safety, their contact numbers and/or radio call-signs.
- An emergency contact should be available at all times so immediate contact can be made in an emergency.
- The names, and contact phone numbers of all group members should be known by the contact person along with full details of the location of the activity and methods of travel.
- In remote areas, the itinerary and emergency contact person should be made known to the local police or DOC Ranger.
- The use of portable radios or cellphones should be considered subject to the availability to recharge batteries. If such equipment is carried, then all members of the party must be trained in the proper use and routines.
- Escape plans should be formulated during the activity planning stage to allow withdrawal of the group or individuals in the event of injury, illness, forest fire or downturn in weather conditions.

Equipment - Subject to the nature of the field activity, there may be a requirement for specific safety equipment such as life jackets, wet weather gear or similar. Such equipment must be of good quality (an approved design where applicable) and must be in good repair. Participants in the activity must be instructed in the use and care of any special equipment. Party members are to ensure that they have adequate clothing to meet any contingencies.

Medical – The supervisor is to be aware of any special medical conditions relating to party members, and any specific medications or treatments for those conditions. Allergies are to be especially noted.

First Aid – Organisers of field activities are to assess whether a fully qualified first aider is to be included in the party. When making this assessment the nature of the activity and proximity to outside assistance is to be considered. A suitably stocked first aid kit (University of Auckland First Response Kit) is to be carried, irrespective of the decision to include or not a qualified first aider. The contents of the kit, including a remote location module, are listed as Appendix A. Arrangements for transportation to medical assistance should be made at the activity planning stage.

Non-University Staff – From time to time non-University persons may be invited to participate in field activities. Such participation may only occur after approval by the Head of Department organising the activity. Such participants are to be briefed on all requirements and treated as though they were students or staff of the University.

Permits – Permits may be required for some activities such as open fires in forest areas, or to gain access to restricted areas. Obtaining such permits is the responsibility of the field activity organiser.

Essential Information – The activity supervisor is to ensure that the appropriate information is available to all concerned parties. Included in this information notice are to be the following items:

- Date, time and duration of the field activity.
- Transport arrangements.
- Medical and first aid requirements and procedures.
- Staff and student responsibilities.
- Essential safety and personal equipment.
- Vaccinations, passport information.
- Personal needs list (special clothing, medication, etc).
- Catering details.
- Accommodation details.
- Smoking rules.

- Alcohol and drug rules.
- Procedures for dealing with sexual harassment.

Such information notices should incorporate a recognition form that members of the field party can formally acknowledge. This is also the form where individuals can enter essential personal details such as allergies, medication, phobias, contact numbers etc.

Remote Field Activity – “Remote” is a flexible concept.

- If emergency or medical support is more than one hour away on foot, then the location should be considered remote.
- The itinerary, a location map and a list of party members should be left with a nominated contact person.
- Persons working in remote areas should establish a regular communication procedure with the nominated contact person. Where possible radio communication should be used, and all party members should be trained in the correct operating procedures. Organisers of the remote field activities should establish and note the location of any “dead spots” where radio transmission is not possible or intermittent.

Vehicles – Vehicles to be used on field activity are only to be driven by staff with the licence classification appropriate for the type of vehicle and number of passengers. No alcohol or drugs are to be consumed while the driver is in control of the vehicle.

Information and Documentation

Not applicable

Training and Supervision

Not applicable

Monitoring

- De-brief following each trip
- Annual hazard review

[Signed]

Director of Human Resources

Equipment Design, Modification, Repair and Commissioning

POLICY

To ensure that any equipment or apparatus, designed, built, repaired or modified for use of The University of Auckland is safe to operate in terms of the Health & Safety in Employment Act 1992.

Scope

Any equipment or apparatus, designed and built by or for The University of Auckland, or any modification or repair of equipment, or any new equipment, must comply with relevant legislative safety requirements, be approved by an appropriately qualified person and carry the necessary performance certification before being commissioned. This applies to all Divisions of the University where such equipment is used.

All devices/equipment/apparatus/machinery connecting to building utilities, eg. electrical wiring, telecommunications cabling, water, gas and waste plumbing, must do so via standard connectors. Under no circumstances are any part of such building utilities to be modified or otherwise interfered with without the express approval and knowledge of Property Services.

Applicable Legislation

1. Health and Safety in Employment Act, 1992.
2. Electricity Act, 1992 and Regulations.
3. NZ Standard 3000:1997(Wiring Regulations).
4. Machinery Act, 1950.
5. Boilers, Lifts, and Cranes Act, 1950.
6. Accident Insurance Act, 1998.

Procedure

1. Electrical devices

Electrically operated devices include teaching and research equipment, teaching research apparatus, electrical machinery and portable electrical appliances.

- The design, manufacture and assembly, modification, repair and commissioning of that operate at voltages higher than 32V AC or 115V DC, must comply the requirements of the Electricity Regulations 1993 and the Electrical Code of NZECP:3, 1998 (Electricity Act, 1992 and Regulations).

- Each device is to have firmly affixed in a readily accessible position a label indicating
 1. Name of maker
 2. Date completed
 3. Purpose of device
 4. Where to be used
- Prior to initial use the device is to be examined and tested for compliance with Regulation 66, Electricity Regulations 1993 by a suitably qualified person who shall sign and date the label on completion of satisfactory testing.

2. Mechanical Devices

Mechanical devices include teaching and research equipment, teaching and research and mechanical machinery.

- In the design, modification, repair and commissioning of devices attention must be given to moving parts; safe working loads, temperatures and pressures; specified working parameters (eg. pressure); and any other matters that would lead to unsafe operation of the devices.
- Mechanical equipment such as pressure vessels etc. may require an engineering design report before obtaining the performance certification necessary to meet legislative requirements.

Apparatus using mains gas must comply with standard gas industry practice and relevant legislation.

Information and Documentation

Not applicable

Training and Supervision

Not Applicable

Monitoring

Annual workplace inspection and hazard review.

[Signed]

Dr John Hood
Vice Chancellor

The Management of Chemicals

POLICY

The University will provide a safe and healthy environment for its staff, students and the wider community by ensuring that all chemicals (including chemical waste) are managed in such a way as to meet the needs of the users, demonstrate international best practice and comply with the following legislation and related regulations and bylaws by the application of a comprehensive **Chemical Management System** which will ensure a minimisation of chemical acquisitions, holdings and disposals.

1. Overview

Chemical management is a systematic approach to procuring, storing, using and disposing of chemicals within a facility. By implementing a **Chemical Management System**, CMS, the University of Auckland can ensure the health and safety of staff and students, prevent accidents, minimise chemical purchases and holdings and minimise chemical waste.

This policy should be read in conjunction with the policy on "The Small Scale Use of Chemicals".

2. Applicable Legislation

- Hazardous Substances and New Organisms Act 1996 (HSNO) (to replace Toxic Substances Act 1979, Dangerous Goods Act 1974, and the Explosives Act 1957)
- Health and Safety in Employment Act 1992 (HASE)
- Resource Management Act 1991 (RMA)
- Building Act 1991
- Asbestos Regulations 1983
- Fire Service Act 1975
- Radiation Protection Act 1965
- Transport Act 1962

3. Definitions

Hazardous Substances/Waste will be classified using the international United Nations Chemical Identification Number:

- | | |
|-----|---|
| 1 | Explosive |
| 2 | Gases: compressed, liquefied or dissolved under pressure |
| 3 | Flammable Liquids |
| 3.1 | Flammable Liquids with a flashpoint below 23°C |
| 3.2 | Flammable Liquids with a flashpoint of 23°C or more, up to and including 61°C |
| 4.1 | Flammable Solids |
| 4.2 | Flammable Solids, substances liable to spontaneous combustion |
| 4.3 | Flammable Solids, substances emitting flammable gases when wet |

- 5.1 Oxidising Agents
- 5.2 Organic Peroxides
- 6.1 Poisonous (Toxic) Substance
- 6.2 Infectious Substance
- 7 Radioactive Substances
- 8 Corrosive
- 9 Miscellaneous Dangerous Substances

The degree of hazard will follow the hazard classifications set out in the HSNO Act regulations:

- Highly hazardous
- Moderately hazardous
- Minor hazard

4. Responsibilities

- a) The University Occupational Health and Safety Advisory Committee (OSHAC) draft policy and procedures, advise the Vice Chancellor on issues relating to chemical safety and monitor the effectiveness of the University's policy and the level of statutory compliance. The Chemical Management Plan Technical Working Group (established to write CMS policy) reports directly to OSHAC.
- b) The Occupational Safety and Health responsibilities of Deans, Heads of Departments, and School Heads are set out in the University Health and Safety Manual, *Governance* section.
- c) The University Health and Safety Office, together with Human Resources Registry, will be responsible for monitoring implementation of University policy and procedures for the management of chemicals. They will also be a central resource for chemical information (MSDS Data Base), advice on the University's chemical management systems and will be the University's point of contact with outside agencies such as the Occupational Safety & Health Service of the Department of Labour, and the Regional Fire Service.
- d) A Chemical Management Safety Committee (CMSC) will be established to advise on technical aspects of chemical procurement, storage, use and disposal.
- e) University employees, students, contractors and visitors shall comply with all sections of the Chemical Management Policy and any associated procedures.

5. Scope of Chemical Management System

- a) All chemicals handled and disposed of by University staff, students, contractors and visitors must be appropriately managed in accordance with the hazardous nature of the substance, to comply with legislative requirements, and to demonstrate international best practice.
- b) In matters relating to purchasing, handling and disposal of chemicals;
 - i. Material Safety Data Sheets (MSDSs) must be available.
 - ii. When a hazardous substance is identified, the hazard shall be eliminated. Failing this, the hazard must be isolated. If this is not possible the risk must be minimised.
 - iii. Hazardous chemicals must finally be disposed of using international best practice.
- c) For all chemical substances a record shall exist for their purchase, use and ultimate disposal, according to the University's Chemical Management System.

- d) On matters relating to the disposal of chemicals, the Chemical Management Safety Committee will advise on technical aspects and the University of Auckland Health and Safety Office will advise on the most appropriate management system for disposal and record the disposal. Disposal will include all chemicals: highly hazardous and high volume low risk.

Contractual agreements relating to chemical disposal must comply with legislative requirements, the University of Auckland's Chemical Management System and international best practice.

6. Inventory Tracking and Control of Chemicals

All chemical substances procured (through whatever means), imported, or prepared on site, will be tracked and controlled whilst the responsibility of The University of Auckland, in that:

- a) **Acquisition:** Will include authorisation for chemical and recording same in tracking system where all chemicals will be clearly identified and labelled. Authorisation of an acquisition signifies acceptance of responsibility for chemical management of the substance in terms of the University of Auckland Chemical Management System. Acquisitions will comply with the policy of minimisation of chemical purchases and chemical holdings.
- b) **Storage:** Storage (including packages and containers) will meet all appropriate Acts and Regulations and be to best practice. Place of storage will be recorded and for extremely hazardous chemicals the person responsible for the chemical will also be recorded. Storage will also include used or waste chemicals.
- c) **Use:** There will be a need for the acquirer of a chemical substance to demonstrate safe usage of the substance and competence in such use.
- d) **Transportation:** Transportation, primarily between and on campus sites, will be to appropriate legislative requirements, standards and regulations. Delivery of chemicals and removal of waste by contractors must also conform to appropriate legislative requirements, standards and regulations.
- e) **Waste Minimisation and Final Disposal:** This will include chemical consumption, recycling (including solvent recovery) and waste disposal. Disposal will meet all the necessary Acts and Regulations and be to best practice. Disposal will also be recorded and disposal system controlled centrally for the University. The chemicals disposed will include all chemicals including highly hazardous and those of low risk.
- f) **Tracking:** A computerised tracking system will be put in place. The system will be user friendly, clearly identify in the tracking system the chemical, its location, quantity, uses and hazards.

7. Hazard Identification and Risk Assessment

Identification of chemical hazards must be reported through the University of Auckland Health and Safety hazard identification system. A risk assessment of identified chemical hazards shall be carried out to determine the degree of risk and appropriate control procedures using the University of Auckland hazard assessment method for each identified hazard. It is the responsibility of the Deans through delegated authority to ensure that records are maintained of identified chemical risks and hazards.

8. Monitoring and Health Surveillance

Monitoring of exposure to hazardous substances and health surveillance will be carried out as defined by University Policy.

9. Emergency Preparedness

All members of the University shall comply with University policy and procedures outlined in 'Emergency Evacuation Procedures Manual' in particular 'Hazardous Substance Spillage'.

10. Information, Instruction and Training

- a) All staff and students who handle chemicals must be provided with appropriate, information, training and instruction relating to chemical management procedures and health and safety requirements.
- b) Before, or upon, the first occasion that a hazardous substance is to be used in the workplace information relating to the nature and health effects of that hazardous substance must be readily available to all employees and students who may be exposed to that substance.
- c) Records of instruction and training on safe chemical handling provided to employees and students must be kept.

11. Management Review

- a) The University of Auckland, Chemical Management System procedures should be reviewed and updated every two years by the Faculties and the Health & Safety Office.
- b) The performance of the Chemical Management System should be reviewed by the Chemical Management Safety Committee and an external reviewer.

[Signed]

Dr John Hood
Vice Chancellor

The Small Scale Use of Chemicals

POLICY

The use of chemicals within the University shall be in accordance with this Policy.

Purpose

To contain those hazardous substances exempt from the need for approval under the Hazardous Substances and New Organisms Act in such a way as to isolate them from the wider community and environment, and to minimise or, where possible, eliminate risk to users of hazardous substances.

Scope

This procedure applies to all facilities in which the handling, storage and dispensing of those hazardous substances exempt from the need to be approved under the Hazardous Substances and New Organisms Act (HSNO) are carried out, or where there is potential exposure to such substances; in particular, it covers all teaching and research activities within the University.

Applicable Legislation

- Health and Safety in Employment Act, 1992
- Hazardous Substances and New Organisms Act, 1996.
(Especially note IIIC, Controls on experimental and analytical chemistry facilities using small quantities of hazardous substances).
- Resource Management Act (1991)
- Auckland Regional Council Trade Waste Bylaws

Procedure

All sites where the small scale use of chemicals is carried out must meet the following requirements:

- At each entrance, the site must be unambiguously identified as one where chemicals are used, and where access is limited to authorised personnel only.
- All containers or packages must be labelled appropriately and stored in a manner complying with the relevant legislation.
- The site must be secure against inadvertent entry by unauthorised person, and against accidental transport off site of hazardous substances.
- The site must possess the appropriate measures for the prevention and control of exposure of employees to hazards.
- Facilities and procedures for the disposal of hazardous substances must comply with legislation.
- Emergency systems, including First Aid facilities and expertise, fire alarms, telephones, and facilities for the neutralisation of hazards, must be provided.
- Persons responsible for managed areas of the site must possess:
 - a) knowledge of the requirements of applicable legislation;

- b) technical knowledge of the behaviour of the substances used in that area; and
- c) practical skill at handling hazardous substances safely.

Information and Documentation

The following information and documentation must be readily available to employees, to enable them to use or handle hazardous substances safely:

- a) Instructions, guidelines, procedures and codes of practice appropriate to the use of hazardous substances at the site;
- b) Materials safety data sheets (MSDS) for all hazardous substances. (These must include the substance name and description, physical properties, health effects, first aid information, precautions for use, and emergency action information);
- c) Access to other information sources (databases, catalogues, web sites etc);
- d) Emergency procedure instructions.

Training and Supervision

- All employees engaged in or associated with the small scale use of chemicals are to have received appropriate safety training. Such training should include:
 - a) The meaning of safety data information;
 - b) Specific work practices or procedures, and control measures;
 - c) Personal health and safety, including the use of personal protective equipment, and health monitoring;
 - d) Emergency procedures.
- Departments should provide safety training at the beginning of each academic year for staff and each semester for students. Supervision should be provided until an employee or student can demonstrate competence and an understanding of the processes involving substances hazardous to health. A record of training should be maintained.

Monitoring

Annual workplace inspection/hazard review.

[Signed]

Director of Human Resources

APPENDIX C

Safety Guideline



Office Work

1. Maintain clear working spaces, keeping aisles and stairways clear of obstacles.
2. Avoid stringing electrical cords, telephone or computer cables across areas where a tripping hazard may be created.
3. Tape cords to the ground when they must cross open spaces or cover them with a heavy mat or proper cable protector.
4. Carefully stack materials in overhead storage areas to avoid objects falling.
5. Ensure shelves are stable and not overloaded.
6. Do not leave filing cabinets and drawers open.
7. Open only one drawer of a filing cabinet at a time - two could topple the cabinet.
8. Do not use desks and chairs as substitutes for ladders.
9. Never stand on swivel chairs.
10. Store scissors, cutting blades, and other sharp instruments separately from other office equipment.
11. Switch off electrical equipment on completion of the day's work. Withdraw plugs where applicable.
12. Withdraw from service and report all faulty or damaged equipment.
13. Take care when opening doors. Obey "push" and "pull" instruction if applicable.
14. Do not run on stairs. Keep to the side and use the handrail.
15. Clean up immediately any liquid spilt on floors.
16. Ensure your workstation is correctly set up ergonomically.
17. Treat all chemicals with respect. Avoid skin contact, inhalation of fumes, and ingestion.
18. Use proper techniques when lifting or moving objects.
19. Report any deficiencies of lighting and ventilation.

Safety Guideline



Computers

CAUSES OF INJURY

Occupational Overuse Syndrome may be caused by many factors but the most common are:

Poor ergonomics

Work stations should be comfortably set up as per the Code of Practice for the use of Visual Display Units published by the Occupational Safety & Health Service of the Department of Labour*.

Lack of task variety

Task variety is essential to prevent static postures for prolonged periods. Where this is impractical it is imperative that micropauses be used every 10 minutes or so and that there be a 10 minute break from computer work every hour. Rest and meal breaks must be taken.

Excessive workloads

Excessive workloads do not allow time for muscles to recover. Prolonged computer usage should be considered in the same manner as are hours of work for airline pilots and truck drivers.

Stress

Stress from whatever its source tends to tense the body and make it more susceptible to OOS type complaints.

INJURY PREVENTION

1. All staff who use a computer as a significant part of their work should attend a OOS workshop run by CPD.
2. Staff are to be instructed and encouraged to report any aches, pains or discomfort. Work stations and workloads are to be investigated and appropriate action taken.
3. Supervisors and managers must monitor their employees' workloads and provide as much task variety as possible. They must insist that micropauses and breaks be taken.
4. Break reminder software should be installed on computers where necessary.*

Code of Practice for the Use of Visual Display Units (within a software programme called "The Floppy Ergonomist") and break reminder software (Kairos Computer Safety Toolkit) can be accessed on the University Intranet.

Home / Staff / Staff Policies (HR) / Health & Safety / OOS

Safety Guideline



Laboratories

COMMON LABORATORY HAZARDS:

1. Eye damage by splashes of chemicals or by flying glass.
2. Heat burns and scalds.
3. Chemical burns to the skin and absorption of toxic chemicals through the skin.
4. Swallowing toxic chemicals.
5. Cuts from broken glassware.
6. Inhaling toxic gases.
7. Electric shock from faulty equipment.
8. Fire from flammable materials, especially solvents.

SAFETY GUIDELINES:

1. Entrance to laboratories is restricted to appropriate members of staff.
2. Students in laboratories must be under the direct supervision, guidance or authority of appropriate staff.
3. General good housekeeping rules apply at all times:
4. Maintain clear working spaces, keeping aisles free of obstacles.
5. Avoid creating trip hazards with cords, cables, hoses etc.
6. Store items correctly in their correct place so that they do not topple or fall.
7. Do not leave cupboard doors and drawers open.
8. Promptly clean up all spills. (Beware, some may require specialist techniques.)
9. Remove from service and report all faulty or damaged equipment.
10. Treat naked flames with care and do not leave Bunsen burners and torches unattended with the flames burning.
11. Turn off equipment on completion of the day's work.
12. Dispose of wastes in the correct containers.
13. Smoking, eating or drinking is not permitted. No food is to be stored in laboratories, including cold rooms, refrigerators and freezers.
14. Long hair must be securely fastened at the back of the head.
15. Good condition footwear must be worn at all times. Sandals, jandals, and open type footwear is forbidden.
16. Lab coats or gowns are to be worn and must be removed on leaving the laboratory.
17. Do not handle any materials or operate any apparatus you do not fully understand or are conversant with.
18. All cuts must be covered.
19. Use appropriate protective clothing, safety screens and fume cupboards as necessary.

20. When about to light Bunsen burners, check for the presence of flammable solvents near the working area.
21. Gloves must be worn when handling:
 - a) human and other body fluids
 - b) radioisotopes
 - c) infectious or potentially infectious material
 - d) certain chemicals
22. Care must be taken that contaminated gloves do not contaminate furniture, phones, door handles etc, and are disposed of in the proper bins - never in ordinary rubbish bins.
23. Never pipette by mouth. Do not place pens or pencils in the mouth.
24. Hands should be washed after completing each task and always before leaving the laboratory.
25. Hazardous procedures are not to be carried out alone or outside of normal hours. Erect warning notices when hazardous operations are being carried out.
26. Wastes are to be properly disposed of.
27. Report all accidents including minor cuts and grazes.
28. Take care when handling glassware:
29. All but elementary operations on glass are to be done by trained personnel.
30. Carry lengths of glass tubing vertically.
31. Use a piece of protective material round the hand when snapping glass at a previously made scratch. Smooth off cut glass ends with heat, a file or emery paper.
32. Use the correct methods for inserting glass tubing into a rubber bug, bending glass, or cutting glass.
33. Inspect new glassware for cracks or other flaws before use.
34. Do not recycle or leave lying around broken or cracked items of glassware.
35. Be aware of the location of the fire extinguishers, safety shower, the location of emergency exits and the evacuation procedure for the building.

FIRST AID

Chemicals in the eye

Wash the eye immediately with copious amounts of water. (ensure the chemical is not washed into the other eye!). Continue to irrigate with water for at least 15 minutes. Cover the eye and see a doctor.

Foreign matter in the eye

Irrigate with a full cup of water. If the object will not wash out, pad the eye and see a doctor.

Minor burns and scalds.

Keep under cold water for 10 minutes. Do not apply any creams or dressings.

Major burns

(Indicated by a waxy appearance of the skin and, in contrast to minor burns, NO PAIN). See a doctor.

Electric shock

SWITCH OFF THE POWER and remove the plug before touching the victim. Apply resuscitation if necessary.

Safety Guideline



Laboratory Animals

1. Animals can inflict wounds and can carry unsuspected infection which may be transmissible to people.
2. The severity of trauma of an animal bite or scratch will vary with the size of the animal, but all bites can provide a portal of entry for an infective agent.
3. Different species are more likely to carry different infective agents and wild animals are more likely to carry infection than laboratory bred animals.
4. Infective animals may excrete infective agents in urine, faeces, saliva or in expired air. The fur or feathers may be infective when there are skin lesions or because of secondary contamination by urine, saliva etc. transmitted through handling, cages, bedding, food and water, or aerial dissemination.
5. Cross infection amongst laboratory animals will increase the degree of contamination of the environment.
6. Infections in the animal house may arise from disease occurring in the normal population or from agents used in diagnosis or in research projects which have been introduced experimentally in the animal.
7. Be aware of the peculiar hazards associated with each type of animal.
8. Do not smoke, eat or drink in the vicinity of animals.
9. Protective clothing is to be worn when handling animals and must be removed on leaving the area.
10. Animals are to be handled with care, and handling is to be limited to that necessary for experiment or hygiene. Treating animals as pets is to be strenuously discouraged.
11. The animal house is to be maintained under negative pressure with outgoing air adequately filtered.
12. Any infected animal area must be able to be strictly isolated.
13. Bedding material is to be assessed for the risk of contamination and the possible spread of infection.
14. Protective vaccinations are essential where personnel are to be exposed to the risks of some known viral or bacterial agent.
15. Urgent attention must be paid to any injury or bite acquired in the course of working with infected animals and appropriate sterilising action taken at the site of the injury.
16. Urgent bacteriological (and virological) control and administration of treatment is to be provided to any septic lesions that subsequently develop at the site of accidental inoculation.
17. Autopsies should be carried out in purpose built rooms equipped with means of ventilation, disinfection and personal decontamination.
18. Wherever possible, whether autopsy is carried out or not, animal remains should be autoclaved.

Safety Guideline



Fieldwork

Approval of Field Activities

The Head of Department is to approve the field activity and must ensure that adequate consideration is given to aspects of health and safety. The responsibility for safe conduct of the activity rests with the designated supervisor.

Supervisor

The supervisor is generally the academic staff member teaching the course but may be any person who has the authority to influence or direct the actions of students, employees or others involved in the activity. In general there should be a ratio of 1 supervisor/leader per 20 participants. The supervisor is responsible for ensuring the party is complete at the end of fieldwork,

Organisers Of Field Activities

Organisers must strategies for dealing with emergencies. The following may act as a guide:

1. The supervisor should know the whereabouts of the local emergency and support agencies such as police, ambulance, Department of Conservation and Mountain Safety, their contact numbers and/or radio call-signs.
2. An emergency contact should be available at all times so immediate contact can be made in an emergency.
3. The names, and contact phone numbers of all group members should be known by the contact person along with full details of the location of the activity and methods of travel.
4. In remote areas, the itinerary and emergency contact person should be made known to the local police or DOC Ranger.
5. The use of portable radios or cellphones should be considered subject to the availability to recharge batteries. If such equipment is carried, then all members of the party must be trained in the proper use and routines.
6. Food and drink should be sufficient for the planned fieldwork, and an emergency supply (ie. chocolate, high energy bars, barley sugars) should also be included.
7. Fieldwork should be within the capability of the majority of the group, and should allow for the needs of individuals who may require extra assistance.
8. Escape plans should be formulated during the activity planning stage to allow withdrawal of the group or individuals in the event of injury, illness, forest fire or downturn in weather conditions.

Emergency Procedures

The supervisor of the field activity is to ensure that correct and immediate action can be taken in the event of injury or other unforeseen emergency. They must ensure the well-being of the rest of the group, obtain any necessary assistance and make contact with the relevant personal or aid authorities.

Equipment

Subject to the nature of the field activity, there may be a requirement for specific safety equipment such as life jackets, wet weather gear or similar. Such equipment must be of good quality (an approved design where applicable) and must be in good repair. Participants in the activity must be instructed in the use and care of any special equipment. Party members are to ensure that they have adequate clothing to meet any contingencies.

Medical

The supervisor is to be aware of any special medical conditions relating to party members, and any specific medications or treatments for those conditions. Allergies are to be especially noted.

First Aid

Organisers of field activities are to assess whether a fully qualified first aider is to be included in the party. When making this assessment the nature of the activity and proximity to outside assistance is to be considered. A suitably stocked first aid kit (University of Auckland First Response Kit) is to be carried, irrespective of the decision to include or not a qualified first aider. Arrangements for transportation to medical assistance should be made at the activity planning stage.

Permits

Permits may be required for some activities such as open fires in forest areas, or to gain access to restricted areas. Obtaining such permits is the responsibility of the field activity organiser. Contact should be made with manuwhenua, and areas of spiritual significance avoided.

Essential Information

The activity supervisor is to ensure that the appropriate information is available to all concerned parties. Included in this information notice are to be the following items:

1. Date, time and duration of the field activity.
2. Transport arrangements.
3. Medical and first aid requirements and procedures.
4. Staff and student responsibilities.
5. Essential safety and personal equipment.
6. Vaccinations, passport information.
7. Personal needs list (special clothing, medication, etc).
8. Catering details.
9. Accommodation details.
10. Smoking rules.
11. Alcohol and drug rules.
12. Procedures for dealing with sexual harassment.

Such information notices should incorporate a recognition form that members of the field party can formally acknowledge. This is also the form where individuals can enter essential personal details such as allergies, medication, phobias, contact numbers etc.

Remote Field Activity

1. "Remote" is a flexible concept. If emergency or medical support is more than one hour away on foot, then the location should be considered remote.
2. The itinerary, a location map and a list of party members should be left with a nominated contact person.
3. Fieldwork in isolated locations or potentially dangerous situations must not be conducted alone.
4. Individuals acting independently of the main group of participants must keep the supervisor advised of their movements and maintain regular communication.
5. Persons working in remote areas should establish a regular communication procedure with the nominated contact person. Where possible radio communication should be used, and all party members should be trained in the correct operating procedures. Organisers of the remote field activities should establish and note the location of any "dead spots" where radio transmission is not possible or intermittent.

Vehicles

Vehicles to be used on field activity are only to be driven by staff with the licence classification appropriate for the type of vehicle and number of passengers. No alcohol or drugs are to be consumed while the driver is in control of the vehicle.

Staff and Students

Staff and students are to take all reasonable care for their own health and safety and to comply with the supervisor's instructions regarding activities and the use of materials and equipment.

Non-University Staff

From time to time non-University persons may be invited to participate in field activities. Such participation may only occur after approval by the Head of Department organising the activity. Such participants are to be briefed on all requirements and treated as though they were students or staff of the University.

After Hours

Responsibility for the safety of students "after hours" can only be determined by assessing the circumstances in each situation. Supervisors are to be aware that there is a significantly greater responsibility in remote or isolated areas than when in a built up area. In some circumstances it may be advisable for students not to leave the campsite.

Safety Guideline



Manual Handling (Lifting & carrying)

In general, any difficulty in lifting or moving an object by yourself indicates that your technique is incorrect and that assistance is required. The hazards associated with lifting and moving objects depend upon the following factors.

The weight of the object and the strength of the lifter.

1. Under 10kg probably no problem
2. 10kg to 20kg take care
3. 20kg to 30kg consider assistance (personal or mechanical)
4. Over 30kg get assistance (personal or mechanical)
5. Do not attempt to lift or move objects that are beyond your natural strength.

The size and shape of the object

1. Your vision must not be obscured when carrying it.
2. You must be able to get a firm grip on the object.
3. Beware of sharp edges or projections that could cut into your hands or impale others.
4. There should be no danger of overbalancing whilst carrying the object.

The position of the object

1. The best side for lifting may not be the one facing you.
2. Do not retrieve or place heavy objects above shoulder height without assistance.
3. Do not retrieve or place heavy objects below your standing surface without assistance.

The path and distance the object is to be moved.

1. Ensure the pathway is clear of all obstructions and trip hazards.
2. Ensure the load can pass through any doorways or openings.
3. Beware and if possible avoid steps and stairs.
4. When dragging or sliding objects - push, don't pull (to avoid it falling onto you).

SAFE LIFTING TECHNIQUE

1. Get close to the load
2. Bend knees
3. Get a good grip (beware of sharp edges - use gloves if necessary), tighten tummy muscles.
4. Lift by pushing up with the legs
5. Keep the load close to your body
6. Avoid twisting your spine whilst carrying a load. Turn your whole body to face the new direction.
7. To put the load down, bend your knees - do not stoop.

SOLVE

1. High load problems
2. Repetitive problems

Safety Guideline



Workshops

1. Machines or tools in a workshop may only be used under the direct supervision, guidance or authority of the University's technical staff.
2. A minimum of 2 people must be in a workshop when operating heavy machinery.
3. Personal safety equipment to protect sight, hearing, breathing, and hands is provided and must be worn when appropriate. **Safety footwear must be worn at all times.**
4. Long hair and loose clothing that may be caught in machinery must be secured.
5. Avoid as far as possible skin contact with oils and solvents etc. Make use of the disposable wipes, clean rags, barrier and cleansing creams provided
6. Always use the correct tool for the job and in the correct manner. Ensure the tool is in good condition and safely stored after use.
7. Maintain workshops in a clean and tidy condition. Replace tools and equipment immediately after use and tidy up swarf and filings etc as soon as possible.
8. Do not 'store' items on the floor where a tripping hazard may be created.
9. Clean up all spills immediately.
10. Keep cables off the floors as far as possible and certainly out of circulation areas.
11. Disconnect portable appliances when not in use.
12. Safety devices on workshop machinery must not be removed or altered except under the direct supervision of the technical staff.
13. Ensure that all safety equipment is in position before using machinery. If equipment becomes defective during operation, the machine must be shut down and reported.
14. When changing tools the machine must always be stationary and isolated electrically.
15. Do not 'store' tools on machine beds while the machine is running.
16. Switch off machinery when not in use.
17. Never use compressed air for blowing dust or swarf off clothing, skin, or machinery. Wrongly used compressed air can cause embolism, blindness or deafness to personnel and damage nearby machinery.
18. Ensure that local and specialist extraction facilities, where installed on some types of machinery, is satisfactorily maintained to prevent a ensure that an adequate concentration of contaminant cannot build up in the workshop atmosphere. This applies particularly to carbon turning and woodworking machinery extract and ventilation systems.
19. Report all breakages on tools and machinery, faulty wiring, worn or defective equipment and unsatisfactory storage arrangements.
20. Ensure a safety chain or bar is in place on vertical racks. Store material in horizontal racks so that accidental contact with protruding ends of rods and sharp corners of sheet materials is minimised.

Safety Guideline

Compressed Gas Cylinders

1. All users of gas cylinders must know and understand the properties of a gas before using it (flammability, toxicity and chemical activity) and must establish plans to deal with any emergency situation that might arise during use.
2. Users of compressed gas must ensure that they are familiar with the procedures recommended by the various suppliers and that the correct regulators and valves are used in the proper manner.
3. The number of cylinders in a workshop or laboratory must be kept to a minimum to minimise the fire and toxic risk, and empty cylinders are to be removed promptly.
4. Cylinders are painted in accordance with BS349 to indicate the gas contained therein but this should not be relied upon alone. Check the official stamping on the cylinder or its label.
5. The valve outlets for combustible gases are screwed left-hand and those for non-combustible are screwed right-hand to avoid the dangers that could arise by the interchange of cylinders during use.
6. Gas cylinders in transit are to have the valve protection cap in position until the cylinder reaches its point of use and is secured in position.
7. Flashback arresters must be fixed to all cylinders.
8. All cylinders must be secured in the cylinder storage area.
9. Care should be taken to ensure that gas cylinders cannot be knocked over.
10. Cylinders should not be lifted by the cap, dragged, slid along the ground, or dropped.
11. Cylinders should be transported by means of a suitable hand trolley chained at the top and bottom and then supported or secured in the vertical position. Free standing cylinders are not permitted. Gas trolleys must not be used as stands.
12. Never move high pressure gas cylinders with regulators attached without first ensuring that the main valve is closed.
13. Cylinders of liquefied gas (e.g. Ammonia, carbon dioxide, chlorine, nitrous oxide, acetylene) must be used vertically.
14. Cylinder valves and regulators should be checked periodically by technicians using them.
15. All main cylinder valves should be opened slowly to eliminate the possibility of compression heating causing an explosion within the regulator. Connections to flexible pipe work should be made securely with "Jubilee" clips or a similar fastening.
16. Gas cylinders should always be turned off at the main valve of the cylinder when not in use - do not rely on the pressure reducer to turn off the gas flow.
17. The contents of a gas cylinder must never be discharged without the use of a pressure control valve: uncontrolled admission of a compressed gas to glass apparatus could result in a serious explosion and so a safety valve device must be fitted between the reducing valve and such apparatus. A gas cylinder must never be discharge completely - a positive pressure of about 2 atmospheres should be left to discourage leakage of air into the cylinder.
18. A cylinder key should be kept with the gas cylinder.
19. The pressure in any piped acetylene system must never exceed 1.6 bar and the system must be fitted with a flame arrester. If other gases are involved non-return valves must be

used. A heavy blow on an acetylene cylinder can ignite the contents as a result of adiabatic compression and the cylinder may explode sometime later if action is not taken immediately. Those responsible for the use of acetylene should be acquainted with the emergency routines to be followed should the cylinder start to warm up.

20. Oil or grease will ignite explosively in the presence of compressed oxygen and thus cylinders and valves must never be greased and must be kept away from possible contamination.
21. The too rapid opening of a valve on a hydrogen cylinder can cause ignition due to static electricity.

Safety Guideline



Electricity

Faults and repairs

1. All electrical work (including fitting and rewiring plugs, and the replacement of fixed wiring fuses) is to be performed by electrically certified technicians,
2. Report any faulty equipment immediately to your supervisor or manager. Outside of normal hours and where prompt attention is needed ring the University Security Desk, x5000. Your concern will be relayed to Property Services who are on call.
3. Switch off the faulty equipment and remove it from service, or leave a warning notice if it is likely to be a hazard to other workers.
4. Faults in fixed wiring are to be reported to Property Services.

Safe working practices

1. Do not interfere with or alter the fixed electrical supply to an office, laboratory or workshop. This includes the opening of fuse boxes.
2. Do not use electrical equipment that has frayed or exposed leads or faulty or damaged plugs.
3. Protect electrical leads from mechanical, chemical, or heat damage.
4. When an item of equipment is situated at a distance from a power point, the electrical lead should not run along the floor. If necessary, place hooks along the wall to raise the lead above the floor.
5. Do not use extension cords as a substitute for fixed wiring. Additional power outlets can be requested from Property Services.
6. When power boxes are used that enable a number of appliances to be run from one power outlet, care must be taken to ensure that the circuit is not overloaded. Where possible, use power boxes with circuit breakers attached. However it is better to once again request more permanent power outlets.
7. Keep clothes, paper and other flammable materials well clear of heaters and other equipment producing heat as a function of their operation.
8. Keep all objects and dust away from air vents required by equipment for cooling to reduce the risk of fire. Liquid spills should be immediately removed as these can cause electrical short circuits that may lead to metal cases becoming 'live' or to fire.
9. Do not attempt construction of electrical equipment or carry out alterations or repairs to it unless you are appropriately licensed and hold a current practicing certificate.
10. Do not open covers on any equipment that leaves potentially 'live' circuits exposed.
11. In wet or damp conditions a residual current device should be used. Protective rubber gloves and boots should be worn.
12. Display warning notices in places where specific dangers are present - high voltage, high power transmitters, lasers, unearthed equipment, etc.
13. Turn off and preferably unplug all electrical apparatus that is not in use.
14. Any electrical equipment left operating and unattended should have the control switch clearly marked and instructions for switching off in the case of emergency posted in a prominent position

15. Do not use three-phase outlets for single-phase equipment.

Equipment Inspection and Testing

1. The AS/NZS 3670/1996 standard provides for the inspection and testing of electrical equipment connected to the mains by flexible leads. A 'competent' person, who does not necessarily need to be electrically qualified, may carry out inspection and testing.
 - a) The inspection involves:
 - i) A check that the equipment is free from obvious external damage.
 - ii) A visual check for damage to accessories, connectors, plugs or outlet sockets.
 - iii) A check that the inner conductors of flexible leads are not visible and that unprotected conductors or insulation tape are not in evidence.
 - iv) A check of the security and alignment of any control knobs.
 - v) A check that covers and guards etc are properly secured in place.
 - vi) A check that mechanical safety devices are in good working order and that ventilation inlets and exhausts are not obstructed.
 - vii) A check that any controls and alarms are in good working order.
 - b) The testing involves:
 - i) An earth test to ensure that there is less than 1ohm resistance between exposed metal parts and earth.
 - ii) An insulation test to ensure that there is more than 1M ohm resistance between phase and neutral and earth.
2. All laboratory and workshop equipment should be inspected and tested annually.
3. Office equipment, where the leads are not flexed in everyday use, should be inspected and tested every 5 years.
4. Departments should maintain a register of electrical equipment, especially laboratory and workshop equipment, which records date of purchase and dates of inspections and testing.
5. Because the inspection and testing to the standard does not involve the removal of covers and an internal inspection, safety hazards may exist in older equipment due to ageing of insulation and loosening of connections, especially where heat and vibration are present.
6. An inspection schedule should be established for equipment greater than 10 years old.
7. Equipment on the schedule should be inspected inside and out by a registered electrical technician at appropriate intervals. Property Services or external firms (eg equipment suppliers) may be contracted to undertake inspections if internal resources are insufficient.
8. Hazards identified common to particular pieces of equipment should be advised to the H&S Coordinator who will maintain a clearing house for this information.
9. External providers of electrical equipment (eg photocopiers) should provide a certificate of electrical safety when they service the equipment.

Equipment fuse replacement

Unplug equipment from the mains before replacing blown fuses in equipment. Ensure that the replacement fuse cartridges is of the correct physical size and electrical rating. It is best to consult technical staff to find the cause for the blown fuse before replacement. Always consult if in doubt.

Imported equipment

Equipment made outside New Zealand may have wire colours and voltage settings that are different from NZ standards. It is advisable to have new imported apparatus checked by an electrically certified technician. Plugs may only be fitted or rewired by and electrically certified technician.

Safety Guideline



Chemicals

1. Most chemicals are dangerous.
2. Chemicals may be toxic (acutely or chronically), corrosive, flammable, and explosive. They may enter the body through the mouth (accidental ingestion because of incorrect containers and/or labels, or sucking of contaminated fingers, pencils etc), nose (as fumes or dusts) or skin (splashes, spills).
3. The storage, transportation, handling/use, and disposal of chemicals must be carefully considered.
4. Always know what you are dealing with. Materials Safety Data Sheets (MSDS) are to be readily available and consulted when necessary.
5. Make proper use of the correct personal protective equipment, safety screens and fume cupboards.
6. Adhere to the general laboratory safety guidelines.

In general all chemicals should be:

1. Clearly labelled with the name of the chemical, and information on any particular hazard associated with the chemical. (eg. corrosive, flammable).
2. Stored in clean containers, fitted with appropriate seals, and in an appropriate place
3. Kept to minimum quantities in use.
4. Kept out of direct sunlight to avoid sharp increases in temperature.
5. Stored on shelves below shoulder level and above floor level.
6. Opened carefully after normal storage, as pressure build-up can occur with some chemicals.

Storage

1. Bulk supplies are to be stored separately in purpose built dangerous goods stores.
2. Incompatible chemicals must not be stored together. e.g. Flammable solvents with strong oxidising agents, in either dangerous goods stores or laboratories.
3. Chemicals in laboratories are to be stored in cupboards and cabinets rather than open shelving.
4. Chemicals are to be stored below 1m to avoid accidental spillage or splashes to eyes and, if on shelves in laboratories, above floor level to avoid accidental contact by cleaning staff.
5. Cupboards, cabinets and shelves must be secure from toppling and not overloaded.
6. Minimum stock levels are to be maintained.
7. Fresh stocks and waste chemical material must never be stored together.

Transportation

1. Winchester carriers should be used when Winchesters have to be transported any distance.
2. Never carry Winchesters by the neck.

3. Special care must be taken when chemicals are being transported any appreciable distance on campus to avoid accidental dropping, toppling, spillage, or contact with people. Ensure containers are securely sealed, protected from bumps or falls. Use appropriate and adequate moving equipment and choose routes clear of obstacles and large numbers of people.

Handling/Use

1. Treat all chemicals as potentially harmful.
2. Note hazard warnings displayed on labels and read any literature supplied by the manufacturer.
3. Handling of volatile or highly toxic chemicals (especially in situations likely to produce aerosols or fine powders) must be carried out in a fume hood.
4. Wear appropriate protective clothing including gloves and safety glasses when working with toxic or corrosive chemicals. NB. Some organic chemicals can penetrate rubber and/or plastic gloves.
5. When diluting strong acids add the acid to the water. (A comes before W; AAA Always Add Acid)
6. Winchester bottles of flammable solvents should not be left on benches. Fill small bottles (e.g. 500ml) for everyday use, and immediately returned Winchester bottles to their normal storage.
7. When flammable solvents are being used, every effort must be made to eliminate all sources of ignition e.g. Flames, hotplates, electric switching contacts, electric motors, and stable electricity sources.
8. To avoid the production of a static spark during pouring operations of flammable solvents, electric bonding should precede any transfers from one metal container to another.
9. Flammable liquids must never be heated with a naked flame.
10. If mechanical stirring of flammable liquids is required the stirrer motor must be of the induction type, or flame proof.
11. Flammable liquids must never be stored in a refrigerator that is not guaranteed flash or spark proof. All domestic type refrigerators and deep freezers not modified to make them flash-proof are to be clearly marked "Unsuitable for Flammable Solvents".
12. Flammable liquids must never be poured down the drain.
13. The toxic properties of, and antidotes for, compounds should be known before commencing experiments.
14. Special permission is required for work involving hazardous chemicals (e.g. cyanides).
15. Antidotes and emergency procedures must be immediately available when hazardous chemicals are being used and fellow workers in the close vicinity should have been informed of the appropriate action to take in case of an accident.
16. Experiments that evolve noxious, toxic or flammable vapours and gases should be undertaken in a fume cupboard that is suitable for the purpose. For general laboratory fume cupboards a face velocity of at least 0.5m/s is recommended while for highly toxic materials face velocities of up to 1m/s are required. The efficiency of every fume cupboard must be checked periodically to comply with Laboratory Standard AS22.
17. Fume cupboards should be cleared of potentially dangerous compounds before any experiment is started and two experiments should never be performed simultaneously in the same fume cupboard. If possible the fume cupboard sash should be in the lowered position. This not only increases the air velocity through the opening but affords a safety screen in the event of fire, splashing of the substance, or explosion of the apparatus.

Disposal

1. Many chemicals (at suitable dilution) can be washed down laboratory sinks with copious amounts of water.

2. Only solvents that are miscible in water should be disposed of in a sink, and then only in small quantities.
3. Many organic solvents will dissolve plastic pipes and sealing compounds and cause plumbing leaks.
4. Ask if in doubt about the disposal of any compound.
5. Unwanted substances must not be hidden in refrigerators, left lying around or dumped on the University premises.

Spills

1. Spills of water or chemicals onto benches or floors must be cleaned up immediately. NB. Clean up of some substances must be done chemically.
2. Any chemicals spilled or splashed on to any part of the body must be washed off immediately under running water. Emergency showers are located in or just outside laboratories. Hand showers can be constructed from PVC tubing attached to a laboratory tap.