University of Manitoba
Basic Lab Safety
and WHMIS
Responsibilities for Safety – Employees and Students

Manitoba’s Provincial Workplace Safety and Health Act (WS&H) is based on the concept of an:

INTERNAL RESPONSIBILITY SYSTEM

This means that everyone at the workplace be they employers, supervisors, workers, students, contractors or self employed persons, all share a responsibility for the health and safety of all persons at the workplace.
GHS Pictograms

Compressed Gas  Dangerously Reactive
Corrosive       Acute Toxic
Flammable       Carcinogen/Mutagen
Oxidizers       Irritant / Toxic
WHMIS 2015 Labels: Supplier Label

Product K1 / Produit K1

Danger
Fatal if swallowed.
Causes skin irritation.

Precautions:
Wear protective gloves.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.

Store locked up.
Dispose of contents/containers in accordance with local regulations.

IF ON SKIN: Wash with plenty of water.
If skin irritation occurs: Get medical advice or attention.
Take off contaminated clothing and wash it before reuse.

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
Rinse mouth.

Danger
Mortel en cas d’ingestion.
Provoque une irritation cutanée.

Conseils:
Porter des gants de protection.
Se laver les mains soigneusement après manipulation.
Ne pas manger, boire ou fumer en manipulant ce produit.

Garder sous clé.
Éliminer le contenu/récipient conformément aux règlements locaux en vigueur.

EN CAS DE CONTACT AVEC LA PEAU : Lever abondamment à l'eau.
En cas d'irritation cutanée : Demander un avis médical/consulter un médecin.
Enlever les vêtements contaminés et les laver avant réutilisation.

EN CAS D'INGESTION : Appeler immédiatement un CENTRE ANTIPOISON ou un médecin.
Rincer la bouche.

Compagnie XYZ, 123 rue Machin St, Mytown, ON, NON ON0 (123) 456-7890
**WHMIS Labels: Workplace Labels**

**Must be present on:**
1) products decanted or transferred from an original container

2) product where original label is lost or becomes illegible

3) products produced and used at the workplace.

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**University of Manitoba**

**Workplace Label**

<table>
<thead>
<tr>
<th>Product Identifier</th>
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**Hazard(s)**

- Flammable
- Oxidizer
- Toxic/poisonous
- Corrosive
- pH: __________
- Reactive/explosive
- Sensitizer/allergen

**Check all that apply**

- Biohazard
- Carcinogen
- Mutagen
- Teratogen
- Skin/eye/lung irritant
- Other specify: __________

**Safe Handling / Personal Protection**

- No inhalation
- No ingestion
- No skin/eye contact
- No chronic exposure
- Gloves
- Glasses/goggles
- N-95 mask
- Organic vapor mask
- Other: __________

**Name:** __________  **Dept:** __________

**Phone #:** __________  **Date:** __________

Refer to Safety Data Sheets for more info
WHMIS SDS: Safety Data Sheet

- Detailed information about the controlled product
- Must be provided by the supplier
- **It is against the law to use a chemical in the workplace without the presence of an SDS**
- Under GHS/WHMIS 2015 Safety Data Sheets need to be updated only when the supplier becomes aware of “Significant New Data” not every 3 years as previously required.
An updated Chemical Inventory system must be maintained.

A printed copy of all Chemicals used in your location must be posted/available.
Chemical Waste Disposal: General Rules

- Any generated waste must be labeled while being collected or stored in lab: **Commercial Contractor** disposes of U of M waste.

- **ALL chemicals MUST be disposed via UM EHSO**

- **NO** evaporation of **organics** in the fume hood

- Separate Biological from Chemical waste

- Sink Disposal is **LIMITED** to:
  1) buffer or detergent or mild acid / base solutions (<1%)
  2) <10% v/v methanol or ethanol solutions
  3) bleach containing solutions (<5% hypochloric acid) followed by copious amounts of water
Waste Disposal Tags

Label must be filled out and attached to all liquid waste containers.
Chemical Waste Disposal Procedures
solid & liquid

- Complete the chemical waste disposal form available on EHSO Hazardous Waste Program Web-site

http://www.umanitoba.ca/campus/health_and_Safety/haz-waste
Controlled Products Storage

- All containers must be labeled and tightly capped
- Maximum container size in labs is 4L
- **Store by compatibility, NOT alphabetically**
- Oxidizers must be stored separately
- FLAMMABLES in flammable storage cabinets (often yellow)
- ACIDS in corrosive resistant acid cabinet, BASES separately
- ORGANIC SOLVENTS separately
- Review Controlled Product Standard on EHSO web-site for more compatibility charts:
Pesticide and Herbicide Safety

WARNING SYMBOLS

The warning symbols on pesticide labels indicate whether the product represents a health risk.

- POISON
- CORROSIVE
- FLAMMABLE
- EXPLOSIVE
Dealing with Hazardous Chemical Spills

- Caretakers are not allowed to clean up any lab spills
- The best time to learn about and practice cleaning up a spill is before it happens.
- Spills should never be cleaned up by untrained staff
Dealing with Hazardous Chemical Spills

Major spill:
Caused Serious Injuries that require immediate medical attention
Pose an immediate danger to life and health
Has potential for fire or explosion
Excess Quantity
Properties or hazards of the spilled material are unknown

Attend to injured person. If possible, apply absorbent material, clear and secure the area and call:

UM Environmental Health and Safety
474-6633 (9AM-5PM)
474-9341 (non-working hrs)
Dealing with Hazardous Chemical Spill Clean Up

If a minor spill occurs:
Do not panic
Determine the identity of the spilled substance
Refer to the Material Safety Data Sheet (MSDS)
Assess the situation
Cordon off the area
Determine the severity of the spill
Major vs. minor
Dealing with Hazardous Chemical Spill Clean Up

Remain calm, tell other lab members and ask for help

-FIRST, deal with personal or co-worker injuries or potential injuries (for example remove all contaminated clothing and wash contaminated skin)

-SECOND, if liquid is involved, obtain your lab spill kit and contain the spill with absorbent materials

-THIRD, tape off the area to avoid people from entering the spill zone

-FOURTH, access the cleanup procedure- SDS

-FIFTH, Dispose of waste thru EHSO
Dealing with Hazardous Chemical Spill Clean Up

Wear a lab coat and spill kit gloves and dust mask (if necessary).

Sweep up solid chemical and broken glass and discard in waste pail.

Once done, cap and arrange for disposal via UofM EHSO.

For liquids, absorb liquid with spill kit absorbent or paper towels depending on volume.

Rinse and dry area.

Clean and replace all cleanup equipment.
Dealing with Hazardous Chemical Spills: Spill Kit

EVERY lab that contains controlled products should have a basic spill kit. Suggested spill clean-up material include:

1) waste pails
2) absorbent pads / material
3) disposable and reusable chemically resistant gloves
4) face shield & goggles
5) caution signs/tape
6) autoclavable or disposable broom & dustpan
7) appropriate respirator may also be required

Kit location and use should be known by ALL lab members.
General Safety

Safety Checklist for Plant Science Staff and Students
General Safety

The purpose of the Safety Checklist is to ensure that no steps in the safety training are overlooked.

All staff and students must complete and sign the Safety Checklist for Plant Science. There are checklists for work at the Point, Lab and Lab with Biosafety.

One copy is to be kept in a binder with your Research group and a second copy is to be kept with the Department.
Biosafety: For researchers who are working with biological agents.

Prevent personal, laboratory and environmental exposure to potentially infectious agents or biohazards. Biosafety defines the containment conditions under which infectious agents can be safely manipulated.
All Biosafety Training at the University of Manitoba is completed through UMLearn.

1. Login to UMLearn using your UMNet ID and password.
2. Once logged in: Click on “Self Registration”
3. Click on “EHS UManitoba Biosafety Training”
4. A course description will appear. Click “Register”
5. Enter registration information as required. Click “Submit”.
6. Click “finish” on the Step3: Confirmation window
7. A registration Summary should appear with the option to “Go To course offering EHS Manitoba Biosafety Training” as an option. Click on this to begin your training.
Follow the instructions below to access online WHMIS training

1. Login to UMLearn using your UMNet ID and password.
   a. For personnel who do not have a UMNet ID, please contact ehso@umanitoba.ca
2. In the top right-hand corner, click on “Support” > “Self Registration”
3. Click on “WHMIS Training”
4. A course description will appear. Click “Register”
5. Enter registration information as required. Click “Submit”.
6. Click “finish” on the Step3: Confirmation window
7. A registration Summary should appear with the option to “Go To course offering WHMIS Training” as an option. Click on this to begin your training.
8. To complete your WHMIS training, an online test with a score of 80% or higher is required. Upon successful completion of the online WHMIS test, a certificate will be generated that you can print. Submit the certificate to your Departmental WHMIS Coordinator for record keeping.
9. If you would like to review your final grade: Assessments > Grades and User Progress. Scroll to the Quizzes section and you can view your overall score. This final score will be recorded in our database within a week of completion
10. Anyone New to the U of M must also complete the New Worker Orientation quiz through UM learn.