

Title:	<i>SAFE WORK PRACTICE #015:</i> GUIDELINES FOR SAFE WORK PRACTICES IN LABORATORIES
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This Safe Work Practice is approved and maintained by the Faculty of Science Safety Committee. Please contact Leanne Lucas, Safety Advisor–Science Activities, with any questions or concerns (leanne.lucas@smu.ca)

1. PURPOSE

1.1 This Safe Work Practice (SWP) provides guidance to Laboratory Instructors, Principal Investigators, Faculty, Departmental Technicians, Teaching Assistants, Students, Staff, Visitors, and others for working safely in teaching and research laboratories at Saint Mary’s University.

2. SCOPE

2.1 Education to provide awareness of this SWP is the responsibility of the Safety Advisor, Science Activities. Enforcement of these instructions is the responsibility of the Department Chair and the Dean of Science.

2.2 It is the responsibility of the Laboratory Instructor, Principal Investigator, Researcher, Departmental Technician, Teaching Assistants and/or Staff to exercise these instructions for their respective duties.

2.3 This SWP will apply anyone participating in activities in teaching, research, and service laboratories in the Faculty of Science at Saint Mary’s University.

3. HEALTH, SAFETY AND ENVIRONMENT

3.1 Working safely is everyone’s responsibility. Each person is responsible for their own health and safety and the health and safety of those around them. All Students will follow the directions of the Teaching Assistant, Department Technician, Laboratory Instructor, Faculty, or Principal Investigator. Failure to follow health and safety directions may result in loss of privilege to participate in laboratory activities as outlined in the **FSSC-SSWP-018** Science Safety Policy. Students who have not completed required pre-lab activities, or have missed

critical information at the start of the laboratory due to late arrival, may be asked to leave the laboratory if failure to undertake the pre-lab activities or missing start of lab instructions presents a safety risk to their work within the laboratory. Such an occurrence may result in academic penalty in the form of lost marks for the missed activities.

3.2 Please refer to the practices outlined in **FSSC-SSWP-010** Guidelines for Safe Work Practices in Teaching Laboratories and **FSSC SSWP-011** Limitation of Exposure to Hazardous Substances and Their Products in Research Activities for procedures to be followed when conducting undergraduate or graduate research, leaving experiments unattended, and performing a hazard assessment.

3.3 Guidelines for Working Safely in Laboratories

3.3.1 Prohibited Activities: Within an area where chemicals and/or biologicals are received, stored, or handled (i.e. your laboratory room), the following activities are prohibited:

3.3.1.1 Eating, drinking, smoking, and chewing gum.

3.3.1.2 Drinking or filling drinking vessels from an eyewash station or laboratory sink.

3.3.1.3 Storing food or drinks for human consumption in the laboratory, laboratory fridge, or laboratory freezer.

3.3.1.4 Microwaving food in the laboratory microwave.

3.3.1.5 Applying anything to your face (lip balm, eyedrops, makeup, etc.).

3.3.1.6 Taking or applying personal medications (unless in an emergency situation).

3.3.1.7 Inserting or removing contact lenses.

3.3.1.8 Unless approved by the instructor, students in teaching labs should not use: cell phones, entertainment devices, or headphones/earbuds.

3.3.2 Check with your Laboratory Instructor, Supervisor, or Principal Investigator on whether there are restrictions on when work may be completed in the laboratory. Consult **FSSC-SSWP-010** Guidelines for Safe Work Practices in Teaching Laboratories and **FSSC SSWP-011** Limitation of Exposure to Hazardous Substances and Their Products in Research Activities for procedures to follow when working alone in the laboratory.

3.3.3 Laboratory Attire. Wear appropriate and properly fitting personal protective equipment (PPE) for the hazards present and the work to be completed. Wear PPE when entering the laboratory. Avoid skin and eye contact by wearing the correct PPE.

3.3.3.1 PPE may include lab coat, safety glasses, appropriate clothing and closed toe shoes, face shields, gloves, etc.

3.3.3.2 To properly protect against spills, a fully buttoned or snapped and correctly fitting lab coat is required. Wear lab coats with sleeves pulled down, not rolled or pulled up. Put on lab coats when entering the lab and remove when exiting the lab. Lab coats should not be worn around campus due to possible contamination.

- 3.3.3.3 Safety glasses, goggles, or face shields must be CSA-approved. Prescription eyeglasses or sunglasses are not acceptable substitutes. Put on safety glasses when entering the lab and remove when exiting.
- 3.3.3.4 Check with your Laboratory Instructor, or Principal Investigator on whether contact lenses may be work in the laboratory.
- 3.3.3.5 Ensure gloves are resistant to the chemicals that will be used and wear double gloves if needed.
- 3.3.3.6 Closed shoes are required to protect against spills. Sandals and crocs do not offer effective protection. “Flats” are not recommended but may be worn with socks that cover feet.
- 3.3.3.7 Pants, skirts, or leggings should reach the top of your shoes and leave no exposed skin between footwear and garment. Pants with large holes, shorts, capris, or short skirts do not offer effective protection against spills.
- 3.3.3.8 Hair that is long enough to create a safety hazard must be tied back.
- 3.3.3.9 In cases where an office is accessed from a laboratory, signage must be posted indicating when it is unsafe to access the office area without proper PPE.
- 3.3.4 Think about what tasks you will be completing, and whether you know how to do it safely. If not, research or talk to a Laboratory Instructor, Principal Investigator, Departmental Technician, or the Safety Advisor, Science Activities to find out how to complete the work safely.
- 3.3.5 Don't taste chemicals. Don't directly smell chemicals. Don't pipet by mouth.
- 3.3.6 Report spills, incidents, and near misses <https://www.smu.ca/about/ohs-reporting-incidents-and-injuries.html> or <https://www.smu.ca/faculty-of-science/science-reporting-hazards-incidents-injuries.html>.
- 3.3.7 Report broken equipment immediately to the Laboratory Instructor or Principal Investigator.
- 3.3.8 Know where safety equipment is located (eyewash station, safety shower, fire extinguisher, first aid kit, fire alarms, spill kits, etc.). Know the exit route in an emergency.
- 3.3.9 Conduct a **Hazard and Control Assessment** prior to using equipment for a different purpose than what the equipment has been used for previously.
- 3.3.10 Check when to use a fume hood or biosafety cabinet. Ensure your experiment is properly vented to protect yourself. Don't vent experiments using windows.
- 3.3.11 Workstations should be adjusted to the user wherever possible, to reduce the effects of repetitive strain injuries.
- 3.3.12 Contact the Safety Advisor, Science Activities and the HR Officer (OHS & Wellness) with any concerns about noise and hearing conservation.
- 3.3.13 Complete the WHMIS course on Brightspace annually.
- 3.3.14 Consult the Safety Data Sheet (SDS) before using chemicals.

- 3.3.15 Label chemicals and samples with a WHMIS supplier or workplace label. Labels shall specify: the product name or contents, owner, date, safe handling procedures, and reference to the SDS, as applicable.
- 3.3.16 Ask questions to clarify laboratory and safety procedures.
- 3.3.17 Close containers after using them and cover chemicals while transporting through the laboratory.
- 3.3.18 Clean spills promptly. Leave the lab area at least as clean as it was when you arrived. Return items to their proper place before leaving the lab.
- 3.3.19 Complete work and ask questions in a respectful manner.
- 3.3.20 Discard items in the appropriate place. Separate chemicals for compatibility into the waste containers, don't dump chemicals down the drain unless this is ok with the Laboratory Instructor or Principal Investigator. Dispose of glass in the broken glass box. Discard of sharp items (needles and syringes, razor blades, etc.) in a sharps containers.

4. SAFETY EQUIPMENT AND SUPPLIES

- 4.1 Please refer to the safety equipment and supplies outlined in **FSSC-SSWP-010** Guidelines for Safe Work Practices in Teaching Laboratories and **FSSC-SSWP-011** Limitation of Exposure to Hazardous Substances and Their Products in Research Activities. Consult with the Laboratory Instructor, Principal Investigator, Researcher, Departmental Technician, Teaching Assistants, or Safety Advisor, Science Activities for guidance on choosing appropriate PPE or other safety equipment for tasks.

5. REFERENCES

- 5.1 Science Safety Documents:
 Hazard and Control Assessment
 SWP 10: Guidelines for Safe Work Practices in Teaching Laboratories
 SWP 11: Limitation of Exposure to Hazardous Substances and Their Products in Research Activities
 SWP 18: Science Safety Policy
<https://www.smu.ca/faculty-of-science/science-safety-documents.html>
- 5.2 Injury, incident, and near miss reporting at Saint Mary's University
<https://www.smu.ca/about/ohs-reporting-incidents-and-injuries.html> or
<https://www.smu.ca/faculty-of-science/science-reporting-hazards-incidents-injuries.html>

6. REVISION HISTORY

Date	Version	Summary of changes
2024-12-13	v1.0	New document approval.