



Safe Work Procedure – Eye Protection

Purpose

This document describes the safe work procedure for minimizing the potential for eye injury using the correct type of eye protection

Scope

This document applies to all UBC employees (faculty, staff, students, visiting researchers, and volunteers)

Regulations

- WorkSafeBC Occupational Health and Safety Regulation
 - Section 8.14: Eye protection

Definitions

Administrative Controls: The modification of work processes or activities to minimize risk

Engineering Controls: The modification of the physical work environment to minimize risk

Hazard: A potential source of harm to a person that can lead to a risk of injury or occupational disease

Risk: The chance of injury or occupational disease

Risk Assessment: The process where hazards are identified, their risk evaluated, and controls for the risk are determined to eliminate the hazard or minimize the risk

Supervisor: The person directly responsible for overseeing the tasks of the worker

Worker: All employees of UBC including faculty, staff, and paid students

Responsibilities

Supervisor

- Identify all workers who carry out this task under your supervision
- Conduct a risk assessment to identify the potential hazards associated with the task and their associated risks
- Implement controls using the hierarchy of controls to minimize the risk due to the hazard
- Ensure safe work procedures are documented



- Ensure proper training has been provided to workers PRIOR to commencing work (e.g. safe work procedures, use of equipment or tools, personal protective equipment requirements, identifying and reporting hazards, etc.) and that the training has been documented
- Ensure workers have access to and understand any required documentation such as manuals, Safety Data Sheets (SDS) etc.
- Educate workers on emergency procedures, contacts and numbers. If emergency contact information is not posted at the workplace, provide the worker with a copy to carry with them.
- The worker must know what to do in case of emergency/injury
- Ongoing consultation with Joint Occupational Health and Safety Committee in the review and revision of this procedure to ensure the content is adequate and relevant to current research
- Communicate risks that may arise outside of those that are predetermined

Workers

- Understand and follow this safe work procedure
- Complete the required training for the task
- Use proper personal protective equipment
- Report any unsafe conditions to their supervisor
- Report all incidents in [CAIRS](#)

Risk Assessment

Attach the completed risk assessment to this document.

Training Requirements

- Biosafety Training
- Chemical Safety Training

Materials/Equipment

- Eye protection (e.g. safety glasses, safety goggles, face shield)

Safe Work Procedure

Before Commencing Work:

1. Selecting the most suitable eye and face protection should take into consideration the following elements:
 - a. Ability to protect against specific workplace hazards
 - b. Should fit properly and be reasonably comfortable to wear
 - c. Should provide unrestricted vision and movement
 - d. Should be durable and cleanable



2. There are three primary types of eye protection used in a laboratory setting.
 - a. **Safety glasses** – Protect from projectiles/flying particles. They have safety frames constructed of metal or plastic and impact-resistant lenses. Side protection is required (often in the form of wrap around lenses).
 - b. **Safety splash goggles** – Forms a seal around the eyes, offering protection against chemical and biological splash hazards, impact, and dusts. They are tight fitting eye protection that completely covers the eyes, eye sockets and facial area surrounding the eyes.
 - c. **Face shield** – Protect against potential splashes or sprays of hazardous liquids. These shields extend from the eyebrows to below the chin and across the width of the head.

Commencing Work/Work Procedure:

1. The type of eye protection necessary for a specific process shall be in accordance with the nature of the risk. The supervisor shall determine the specific requirements. However, here are the Faculty of Science JOHSC guidelines:
 - a. Appropriate eye protection must be worn in the lab environment when handling laboratory chemicals and biohazardous materials as per MSDS specifications and at any time when there is a risk for eye irritation or injury.
 - b. Eye protection may not be required when handling small volumes of dilute aqueous solutions and when there is minimal risk of eye irritation or injury due to splash or flying particles. This includes assessment of what kind of work is being performed by other people in the laboratory.
2. The supervisor must supply suitable safety glasses, splash goggles, and face shields for all employees, including paid undergraduate and graduate students. Volunteers, visitors, and other laboratory workers will be supplied with protective eyewear by the visiting lab.
3. Prescription glasses wearers can wear safety glasses that are designed to be worn over their eyeglasses or they can purchase CSA-rated prescription safety glasses (prescription safety glasses must meet CSA Standard CAN/CSA-Z94.3-92).
4. Based on existing evidence it is reasonable to allow the use of contact lenses in work environments in conjunction with appropriate protective eyewear. However, contact lenses should not be used when the work environment involves exposure to intense heat, molten metals, high particulate atmospheres, corrosive substances, or certain volatile chemical hazards (examples include but not limited to (acrylonitrile, methylene chloride, 1,2-dibromo-3-chloropropane, ethylene oxide and 4,4'-methylenedianiline).
5. Below are some general guidelines for selecting appropriate laboratory eye protection. Please refer to MSDS for specific guidelines and if necessary contact UBC RMS to obtain advice on how to evaluate the hazards of the job and how to select the proper PPE.



CHEMICALS		
Hazard Type	Protection	Considerations
Hazardous chemicals	Safety glasses	Eye protection is required when working with chemicals on the bench or in a fume hood
Hazardous chemicals that pose a splash or dust hazard	Chemical splash goggles	
Cryogenic liquids	Face shield, splash goggles or safety glasses for smaller amounts	
Highly reactive materials	Chemical splash goggles and a face shield	
BIOLOGICAL MATERIALS		
Hazard Type	Protection	Considerations
Potentially infectious materials, including microorganisms and viruses, human and non-human primate material, outside of a biosafety cabinet.	Safety glasses, splash goggles and or face shield	Eye protection is typically not required when working in a biosafety cabinet, except if hazardous materials are being handled in the lab. Eye protection may be needed when removing items from the biosafety cabinet.
PHYSICAL HAZARDS		
Hazards	Protection	Considerations
Chips, particles, glass shards	Safety glasses	
Cutting/connecting glass tubing	Safety glasses	



Changing out compressed gas cylinders, affixing regulator to cylinder	Safety glasses	
Compressed air for cleaning equipment	Safety goggles	
OTHER POTENTIAL HAZARDS		
Hazard Type	Protection	Considerations
Radioactive materials, liquid or powder	Safety glasses or goggles dependent on physical state of material.	
Lasers	Eyewear is dependent on wavelength and energy/power of laser	
Open ultraviolet light source	Face shield with UV protection	
Infrared emitting equipment	Shaded goggles	

Post Procedure:

1. Notify the lab manager if anyone may have been involved in an incident and submit a report to CAIRS.

Emergency Rescue and Evacuation Procedures

Emergency Contact Information

- Police (911)

Mode of Emergency Communication

- Cell phone, landline

First Aid

- UBC Vancouver Campus First Aid (604.822.4444)

Emergency Procedures

- On campus and off campus
 - Seek first aid
 - Contact supervisor
 - Report incident in CAIRS



Review and Retention

This SWP is reviewed annually or whenever deemed necessary by the responsible departmental representative.

Document Approval Signatures

Name of Supervisor

Signature of Supervisor

Date

Name of Department Head

Signature of Department Head

Date