



Laboratory Safety Program

EYE AND FACE PROTECTION FACT SHEET

Eye and face protection must be worn by all URI employees, students or visitors to areas where chemicals are used and stored. Protective eye and face equipment must be worn where there is a reasonable probability of injury from hazardous chemicals. This document outlines when eye protection is needed and what type of eye protection is needed.

Eye protection should be selected based on the following table:

Table of Eye Protection Selection Criteria

Operation: **Eye Protection Required:**

Entry into laboratory or liquid chemical area when a reasonable probability of eye injury exists	Safety glasses
Handling corrosive chemicals	Chemical splash goggles
Handling injurious chemicals	Chemical splash goggles
Transferring more than one liter quantities corrosive chemicals	Splash goggles and face shield

Many laboratories on campus contain liquids, acids, bases and organic solvents that may present a splash hazard. Other non-laboratory areas, like storerooms, farms, and maintenance areas may have corrosive or injurious chemicals or jobs that require eye protection be worn if the probability of an eye injury exists. These laboratories and other work areas will need to do a risk assessment and implement the eye and face protection policy accordingly. The risk assessment should evaluate the potential for an eye injury to occur and should determine the type of eye protection to be worn. Typical activities that would present the reasonable probability of eye injury include:

- Pipetting
- Opening centrifuge tubes
- Using syringes
- Mixing/vortexing
- Preparing solutions
- Titration
- Pouring

The above list is not inclusive and you should consider all procedures that involve the potential for splash. Past accidents involving a splash to the eye would indicate a situation that requires eye protection. An employee working adjacent to an activity that requires eye protection may also require eye protection. Different chemicals will require different eye protection based on the pH, the potential for skin/eye damage and the quantity handled.

The use of corrosives and injurious chemicals would definitely require eye protection. Liquid corrosive chemicals are those with a pH < 5.0 or a pH >9. Solid chemicals are considered corrosive when in solution; they fall in the above pH range. Injurious chemicals cause tissue destruction at the site of contact. For example, methylene chloride or methylethylketone peroxide. Refer to the MSDS for assistance in determining the injurious nature of chemicals and for recommendations on eye protection.

In the Chemistry Department, all employees or visitors are required to wear eye protection whenever they enter the lab due to their Department protocol and the high use of chemicals. In other laboratories or chemical use areas, eye protection must be worn whenever liquid chemicals are used or handled or the probability of an eye injury exists.

Approved Safety glasses and Chemical Splash goggles are carried by many vendors of laboratory supplies. Any safety glasses certified to ANSI Z87-1 are acceptable. Goggles must be the chemical splash type with indirect vents and NOT the direct-vented impact goggles. Face shields shall be worn over the top of splash goggles. Employees should have their own pair of safety glasses as a minimum. The glasses should fit and the lenses should not be scratched or clouded. Tinted lenses are not recommended for normal indoor activities.

For wearers of prescription eyeglasses, these are not safety glasses unless they have both side shields and shatter resistant lenses.