

3.5.3 Eye Wash Stations and Safety Showers

3.5.3.1 Safety Showers:

Each laboratory area should be equipped with a safety shower. The ANSI standard, Z358.1-1980, emergency eyewash and shower equipment, requires that emergency showers be located no more than 10 seconds in time or greater than 100 feet from the hazard. The shower must be readily accessible, be kept clear of obstructions, and clearly labeled. The valve must open readily and remain open until intentionally closed. Although an associated floor drain is desirable, its absence should not prohibit installation of a safety shower. The above mentioned standards apply to all emergency showers including eye and face wash stations. The departments of Environmental Health, Safety & Risk Management together with the Laboratory supervisor are responsible for inspecting the safety showers on a regular schedule.

- The water column must be between 82 and 92 inches with a minimum of 20 inches diameter of column and 60 inches above the surface.
- Water delivered must be a minimum of 20 gallons per minute.
- If an enclosure is used there must be an unobstructed minimum diameter of 34 inches.
- Must be identified with a highly visible sign located in a well lit area.

3.5.3.2 Eye/Face Wash Stations:

- Eye wash stations are designed to provide a gentle and continuous, low pressure flow of tempered aerated potable water at 0.4 gallons per minute for a period of at least 15 minutes.
- All employees and students must be familiar with the location and use of eye wash and safety showers even if their job does not involve working directly with toxic or corrosive chemicals.
- The distance from the location of the employee and eye wash station should not exceed 10 seconds walking distance or greater than 100 feet from the hazard.
- The path to the eye wash or face wash station should be unobstructed.
- The path to the eye wash or safety shower cannot involve opening a door unless:
 - a. There is always another employee present that can open the door.
 - b. The exposed employee can exit the room without having to manually manipulate a door knob (i.e. push bar)
- The location of all eye washes and safety showers must be clearly marked with a highly visible sign. The area around the shower must be well lit.
- The temperature of the water delivered should be between 60°F and 95°F.
- Plumbed units should be activated once a week to flush lines. Self contained units should be activated in accordance with the manufacturer's directions.

3.5.3.3 Emergencies Procedures for Eye Wash

- Hold eyelids open using the thumb and index finger to help ensure that effective rinsing has occurred behind the eyelid. It is normal to close the eyes tightly when splashed, but this will prevent water or eye solution from rinsing and washing the chemical out. Eyelids must be held open.
- Necessary training or practice of this procedure to respective personnel is encouraged to help familiarize potential users with the feel of rinsing. It will also make it easier for the user to react both promptly and properly to an emergency situation.
- Always wash from the outside edges of the eyes to the inside; this will help to avoid washing the chemicals back into the eyes or into an unaffected eye.
- Water or eye solution should not be directly aimed onto the eyeball, but aimed at the base of the nose.
- Velocity of the stream of water must be such that injury to the eye is avoided.
- Flush eyes and eyelids with water or eye solution for a minimum of 15 minutes. “Roll” eyes around to ensure full rinsing.
- Contact lenses must be removed as soon as possible to ensure that chemicals are not trapped behind the lenses and then the eyes can be completely rinsed of any harmful chemicals.

Medical attention should be sought immediately. Ideally another person in the lab should make contact with responders or dial 911. The sooner medical attention can be given, the chances of not sustaining permanent damage or blindness is greatly improved.