

EMERGENCY EYEWASH AND SHOWER EQUIPMENT

(For assistance, please contact EHS at (402) 472-4925, or visit our web site at <http://ehs.unl.edu/>)

Note: Emergency eyewash stations and showers are not substitutes for eye and face protection and protective clothing.

Where are an emergency eyewash and/or shower required to be?

- In areas where open containers of caustic/corrosive and hazardous chemicals are used (eyewash station and shower).
- Chemical, biological, and radioactive laboratories (eyewash station and shower).
- Shops (at a minimum, eyewash stations are recommended. If hazardous chemicals are used in the shop, a safety shower should also be present).

What kind of eyewash station and emergency shower is necessary?

Eyewash stations must feature hands free operation and provide 15 minutes of continuous flow at 0.4 gallons per minute. Showers must also feature hands free operation and deliver 30 gallons per minute.

Hand-held drench hoses may be used in conjunction with safety showers and eyewash stations, but are not a substitute for safety showers or eyewash stations.

Where should they be located?

Eyewash stations and emergency showers should be located within 10 seconds unobstructed travel (do not block) of the hazard; preferably within the laboratory/shop/work area; and preferably within 10 feet of the hazard.

Testing and maintenance requirements

Document weekly testing of the eyewash station. Tests verify proper operation and flush the line. Facilities Maintenance flushes emergency showers annually on campus. Off-campus facilities are required to flush their showers at least annually.

Training

All employees and lab students who might be exposed to a chemical splash must be instructed in the proper use of the eyewash and shower.

Requirements that apply to both eyewash units and shower units

- Sole purpose must be as an eyewash or emergency shower unit.
- A shower alone does not serve the purpose of an eyewash station.
- Both must be equipped with a quick-opening valve that remains open (simple to operate in less than or equal to 1 second).
- Operational with both hands free.
- Travel time less than or equal to 10 seconds; ANSI recommends eyewashes be located immediately adjacent to the hazard for pH less than or equal to 1 or greater than or equal to 12. Unit shall be on the same level as the hazardous substance.
- Location well lit, highly visible, marked with highly visible sign.
- Unobstructed passages and access to units.
- Operable at all times with provisions to prevent unauthorized shutoff.
- Sewer connection or drain not required, but does facilitate testing (particularly eyewash stations).
- Must be in compliance with ANSI Z358.1-1998 and verified annually through inspection.
- Units shall be installed in accordance with manufacturer's instructions.
- Tepid water supply is recommended (but cold only is acceptable if tepid supply is not feasible).

Requirements for eyewashes only

- Installed so nozzles are 83.8 to 114.3 cm (33 to 45 inches) from floor.
- Pressure reduced divergent flow of flushing liquid.
- Minimum of 1.5 liters per minute (0.4 gallons per minute) potable water or commercial flush for 15 minutes.
- Weekly checks to flush lines and verify proper operation; plumbed units to be flushed for three minutes.
- Where contamination can occur, nozzles protected from contaminants by covers; removal of covers shall not require any extra step beyond activation of unit.
- Self-contained and portable units must provide 1.5 liters per minute (0.4 gallons per minute) for 15 minutes (equals six-gallon capacity).
- Portable units to be used only where fixed installation is not feasible.
- Squeeze bottles are used only in conjunction with eyewashes.

- Drench hoses are used only in conjunction with eyewashes unless at open surface tanks.
- Faucet-mounted eyewashes are acceptable when all requirements for plumbed units are met.

Requirements for showers only

- Overhead mounted with head height 208.3 to 243.8 cm (82 to 96 inches) from floor or platform.
- Minimum of 75.7 liters per minute (20 gallons per minute) flow dispersed throughout pattern.
- Valve actuator location less than or equal to 173.3 cm (69 inches) above the floor or platform.