



# Emergency Eyewashes and Showers FACT SHEET

Number: Lab 01

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## INTRODUCTION

Every laboratory newly constructed or renovated, or any room used for similar purposes wherein corrosives or flammable liquids are handled or where open flame devices are used, shall be equipped with one or more emergency eyewashes and showers.

### **Eyewashes and Showers Regulations:**

- Commonwealth of Massachusetts - 527 CMR 10.00 - Fire Prevention, Section 10.02, Fire Extinguishers - Section (2)
- Occupational Safety and Health Administration - 29 CFR 1910.151(c), by reference to comply with American National Standards Institute (ANSI) - ANSI Standard, Z358.1-2004

### **HARVARD UNIVERSITY POLICY – CAMBRIDGE/ALLSTON CAMPUS**

Every laboratory newly constructed or renovated, or any room used for similar purposes wherein corrosives or flammable liquids are handled and other work areas including: mechanical rooms, bio hazardous waste, radiological materials, pH neutralization systems, battery charging areas, spraying operations, high dust areas, etc. must have an eyewash station and emergency showering in the immediate area.

**Testing of Equipment:** Eyewash stations should be visually inspected and tested weekly for 10 – 15 seconds to insure proper operations and water flow. Eyewashes and showers must also be inspected semi-annually by the Facility Operations or Building Manager. Documentation of testing must be maintained (i.e. tag on equipment, log sheet, etc.)

## INTRODUCTION

**The Occupational Safety and Health Administration - 29 CFR 1910.151(c)** requires “where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.”

**The American National Standards Institute (ANSI), Z358.1-2004.** ANSI states that “emergency eyewash and shower equipment shall be located on the same level as the hazard, have un-obstructed access, and require not more than 10 seconds to reach.”

The "10 second" rule may be modified depending on the potential effect of the chemical. Where a highly corrosive chemical is used, an emergency shower and eyewash station may be required within 3 - 6 meters (10 - 20 ft) from the hazard. These units should be installed in such a way that they do not become contaminated from corrosive chemicals used nearby.

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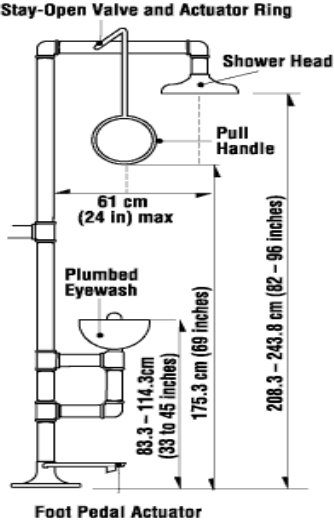

## SELECTION OF EMERGENCY EYEWASHES AND SHOWERS

**All Emergency Eyewashes and Showers must comply with American National Standards Institute (ANSI), Z358.1-2004.**

- **Emergency showers** minimum volume of spray should be 75.7 liters/minute (20 gallons/minute) for a minimum time of 15 minutes. The shower should also be designed so that it can be activated in less than 1 second, and it remains operational without the operator's hand on the valve (or lever, handle, etc.).
- **Eyewash stations** must deliver fluid to both eyes simultaneously at a volume of not less than 1.5 liters/minute (0.4 gallons/minute) for 15 minutes. However, the volume should not be at a velocity that may injure the eyes.
- **Drench Hoses** are considered to be **secondary** to proper emergency showers and eyewash stations (e.g., having a drench hose does not replace the need for showers/stations). **Monocular eyewashes - drench hoses do not meet ANSI or OSHA standards for emergency eyewashes or showers.** Drench hoses may be used to "spot" rinse an area when a full shower is not required, to assist a victim when the victim is unable to stand or is unconscious, or to wash under a piece of clothing before the clothing is removed.
- **Water temperature** ANSI standard requires that the water be "tepid". In general, water temperatures in the range 27°-35°C (about 80°- 95°F) are considered suitable with temperatures in the higher part of the range if extended periods of eye irrigation or showering are required.
- **Floor drains** should be considered where fixed eyewash stations and showers are located to prevent flooding during use. Traps to the floor drains should consider "U" type or primed P - traps.
- **Privacy considerations** – normal showers, should not be used in lieu of an emergency shower for drenching and removing chemicals..

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IMAGES:

<p><b>Drench hose – NOT permitted as primary emergency eyewash/shower</b></p>	<p><b>Preferred Combination Eyewash/Shower</b></p>
	
<p><b>Acceptable Eyewash Stations</b></p> 	<p><b>Acceptable Eyewash Stations</b></p> 