



Safety Shower & Eyewash Program

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ACRONYMS & DEFINITIONS

Combination Unit	A unit combining a shower with an eyewash or eye/face wash or a drench hose, or both, into one common assembly
Drench Hose	A supplemental device consisting of a flexible hose connected to a flushing fluid supply and used to provide fluid to irrigate and flush face and body areas
EHS	Environmental Health and Safety
Eye/Face Wash	A device used to irrigate and flush both the eyes and face
Eyewash	A device used to irrigate and flush the eyes
Hand-Held Drench Hose	A flexible hose connected to a water supply and used to irrigate and flush eyes, face and body areas
Hazardous Material	Any substance or compound that has the capability of producing adverse effects on the health and safety of humans
Safety Shower	A unit that enables the user to have water cascading over the entire body
Self-Closing Valve	A valve that closes automatically when released by the user
Stay-Open Valve	A valve that must be closed manually
Tepid	A flushing fluid temperature conducive to promoting a minimum 15-minute irrigation period. 16-38°C, 60-100°F

TABLE OF CONTENTS

1. SCOPE.....	7
2. RESPONSIBILITIES.....	7
2.1. Environmental Health & Safety.....	7
2.2. Deans, Directors, and Department Heads.....	7
2.3. Facilities Management.....	7
2.4. Supervisors of Departments/Labs and Pls.....	7
3. EQUIPMENT PERFORMANCE.....	8
3.1. Safety Showers.....	8
3.2. Eyewash Units (Including Eye/Face Wash Units).....	8
3.3. Hand-Held Drench Hose.....	9
4. INSTALLATION.....	9
5. TESTING PROCEDURES.....	10
6. SHOWER & EYE/FACE WASH USE.....	11
7. TRAINING.....	11

INTRODUCTION

Safety is a core value of the University of New Mexico (UNM) and UNM leadership is committed to creating and fostering a culture of safety within the University community. Part of demonstrating this commitment is providing guidelines and resources that are specific to activities and materials used in laboratories. This program focuses on safety showers and eyewashes.

1. SCOPE

This program outlines the eyewash and safety shower equipment requirements for the rinsing of UNM personnel (employees, students, visitors) exposed to hazardous materials. Each department shall provide eyewash and safety shower equipment within the work area where hazardous materials are used, per OSHA (29 CFR 1910.151(c)) and ANSI (ANSI [Z]358.1-2004) standards.

2. RESPONSIBILITIES

2.1. Environmental Health & Safety is responsible for:

- Preparing, reviewing and periodically revising this program.
- Monitoring compliance with this program.
- Providing consultation on placement of eyewash stations and safety showers.

2.2. Deans, Directors, and Department Heads are responsible for:

- Providing safety shower and eyewash stations within the work area where employees, students and/or visitors may be exposed to hazardous materials.
- Ensuring departmental compliance with all the procedures outlined in this program.

2.3. Facilities Management is responsible for:

- Monthly activation/flushing of all safety showers.
- Monthly activation of eyewash stations that are part of a safety shower/eyewash station combo unit.
- Repairs to all safety showers and eyewash stations.

2.4. Supervisors of Departments/Labs and PIs are responsible for:

- Weekly activation/flushing of eyewash and eye/face wash equipment.
- Instructing students and staff on the location and proper use of safety showers and eyewashes.

3. EQUIPMENT PERFORMANCE

3.1. Safety Showers

- Safety shower heads must be located between 82 inches and 96 inches from the surface on which the user stands.
- Safety shower heads must be capable of delivering at least 20 gallons of water per minute for 15 minutes at a velocity that will not be injurious to the user.
- Control valves must be of the Stay-Open type. If shut off valves are installed in the supply line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.
- Safety showers must be equipped with tepid water, 60°F-100°F. UNM cold water comes from the tap at greater than 60°F in most circumstances, therefore it does not require tempering.
- The spray pattern shall have a minimum diameter of 20 inches at 60 inches above the surface on which the user stands, and the center of the spray pattern shall be located at least 16 inches from any obstruction.
- Safety showers shall be designed, manufactured and installed in such a manner that, once activated, they can be used without requiring the use of the operator's hands.
- During the design phase of a new building, safety showers and eyewash stations should be equipped with a drain to prevent building damage from flooding. Drain plugs should be flush-mounted to prevent a tripping hazard. Plugs may be removed in the event the safety shower is used.

3.2. Eyewash Units (Including Eye/Face Wash Units)

- Eyewash units shall be installed with the nozzles between 33 inches and 53 inches from the floor and at least 6 inches from the wall or nearest obstruction.
- Eyewash units must provide a controlled flow of flushing fluid to both eyes simultaneously at a velocity that will not be injurious to the user.
- Eyewashes shall be designed, manufactured and installed in such a manner that, once activated, they can be used without requiring the use of the operator's hands.
- There must be no sharp projections anywhere in the operating area of the unit.
- Discharge nozzles must be protected from airborne contaminants. Whatever means is used to provide this protection must not require a separate motion, by the user, to remove it when activating the unit.
- Eyewash units must be capable of delivering 0.4 gallons of flushing fluid per minute for 15 minutes.
- Eye/face wash units must be capable of delivering 3.0 gallons of flushing fluid per minute for 15 minutes.
- Eyewash units must be designed with enough room to allow the eyelids to be held open with the hands while the eyes are in the stream of flushing fluid.

- Control valves must be of the Stay-Open type. If shut off valves are installed in the supply line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.
- Personal wash units do not meet the criteria of plumbed or self-contained eyewash equipment. The main purpose of these units is to supply immediate flushing. With this accomplished, the injured individual should then proceed to a plumbed or self-contained eyewash and flush the eyes for the required 15-minute period.

3.3. Hand-Held Drench Hose

- Hand-held drench hoses must be capable of delivering 3.0 gallons of flushing fluid per minute for 15 minutes.
- Hand-held drench hoses must provide a controlled flow of flushing fluid at a velocity that will not be injurious to the user.
- Discharge nozzles must be protected from airborne contaminants. Whatever means is used to provide this protection must not require a separate motion, by the user, to remove it when activating the unit.
- Control valves must be of the Stay-Open type. If shut off valves are installed in the supply line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.
- Hand-held drench hoses should not be used as a substitute for an eyewash unit unless it meets the performance indicators listed in the above section and it is not feasible to install an eyewash unit.

4. INSTALLATION

Safety showers must be located such that they are accessible and require no more than ten (10) seconds to reach. This functionally means each lab should be equipped with a safety shower. In spaces where the safety showers are not located within the lab, there must be an unobstructed and clear path on the same level as the hazard that the user can follow without the use of vision.

Eyewash units (including eye/face wash and hand-held drench hoses) must be located such that they are accessible and require no more than ten (10) seconds to reach. (10 feet where strong corrosives are the hazard). The eyewash shall be located on the same level as the hazard and the path of travel shall be free of obstructions (furniture, equipment, materials). **NOTE: Remember the injured worker may have to locate the unit while blinded by a contaminant.**

NOTE: It is recognized that the average person covers a distance of approximately 55 feet in 10 seconds when walking at a normal pace. The physical and emotional state of a potential victim should be considered along with the likelihood of personnel in the immediate area to assist.

NOTE: A door is considered to be an obstruction. When the hazard is not corrosive, one intervening door can be present between labs so long as it opens in the same direction of travel as the person attempting to reach the equipment and the door is equipped with a closing mechanism that cannot be locked to impede access to the equipment.

Safety showers and eyewashes must be located in an area identified with a highly visible sign and in a well-lit area.

5. TESTING PROCEDURES

Facilities Management Department (or PIs/lab personnel, see section 5.4) tests equipment on the following schedule:

5.1. Safety showers are tested at least **monthly** in accordance with the following:

- Verify adequate flow (20 gpm) from the unit.
- Verify that the control valve is of the stay-open type and is operating properly.
- Operate for a period of time (2-3 minutes) sufficient to flush any stale water, sediment, and/or contaminants from the supply lines.
- If equipped, remove the drain plug to make sure it is functioning properly; replace plug after test.
- Record the inspection on the attached tag (date and initials).

5.2. Eyewash units are tested at least **monthly** in accordance with the following:

- Verify flow from the unit.
- Verify that the control valve is of the stay-open type and is operating properly.
- Verify that the flushing streams rise to equal heights and that the fluid will wash both eyes simultaneously.
- Operate for a period of time (2-3 minutes) sufficient to flush any stale fluid, sediment, and/or contaminants from the supply lines.
- Record the inspection on the attached tag (date and initials).

5.3. Hand-held drench hose units are tested at least **monthly** in accordance with the following:

- Verify flow from the unit.
- Verify that the control valve is of the stay-open type and is operating properly.
- Verify that the flushing streams rise to equal heights and will wash both eyes simultaneously.
- Operate for a period of time sufficient to flush any stale fluid, sediment, and/or contaminants from the supply lines.
- Verify that the hose is free to extend from the mounting bracket and is easy to maneuver.
- Record the inspection on the attached tag (date and initials).

5.4. Weekly Flushing

PIs and/or lab personnel should activate eyewash and eye/face units weekly for a period of 2-3 minutes to flush any stale fluid, sediment, and bacteria/viruses from the supply lines.

6. SHOWER & EYE/FACE WASH USE

Immediate and proper use of emergency eye/face wash and safety showers is essential to minimizing injury. The following procedures should aid in minimizing injury due to contact with harmful materials:

- Go immediately! Do not waste a moment. Time is of the essence.
- For safety shower:
 1. Pull the handle to activate the shower.
 2. Immediately remove contaminated clothing. Do this while under the shower when gross contamination has occurred. Have someone assist with clothing removal when possible.
 3. If equipped, have the assistant remove the drain plug to allow water to drain.
 4. Flush exposed area for at least 15 minutes.
 5. Seek medical attention after flushing the exposed area.
 6. Notify your supervisor as soon as possible.
 7. Notify EHS and Risk Services.
- For eye/face wash station:
 1. Activate the hands-free lever. If eyewash is of the hand-held type, have someone hold it for you, if possible.
 2. Get your eyes directly into the stream of water.
 3. If you have contacts, gently remove them while flushing.
 4. Hold your eyes open with your fingers.
 5. Gently roll your eyes to ensure complete flushing.
 6. Flush for at least 15 minutes.
 7. Seek medical attention after flushing.
 8. Notify your supervisor as soon as possible.
 9. Notify EHS and Risk Services.

7. TRAINING

All UNM personnel who work in an area equipped with a safety shower and/or eyewash unit must take “Eyewashes and Safety Showers” training available on Learning Central. In addition, supervisors shall train all persons that might be exposed to potentially injurious/hazardous materials on the location and proper operation of eyewash, eye/face wash and safety shower units in their specific work area. Contact Environmental Health & Safety (505-277-2753) for questions or assistance with training.












Shower & Eyewash Program


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