



Standard Operating Procedure Corrosives (Organic and Inorganic)

General:

The Laboratory Director has conducted a risk assessment for hazards, selected appropriate PPE and provided equipment to employees. Use of PPE as described in this procedure and in the PPE program will be enforced in this Laboratory by the Laboratory Supervisor/Principal Investigator

This SOP identifies Procedures and PPE needs for use of Corrosives (Organic and Inorganic)

Procedures:



A. Eye Protection

1. Please review individual Safety Data Sheets (SDS) for appropriate eye protection
2. If using Corrosives that do not involve Hydrofluoric Acid, Ultra-Violet, or Lasers, then Chemical Safety Goggles should be used. Prescription goggles are approved.
 - i. Prescription goggles cannot be paid for by unrestricted indexes
 - ii. If Prescription goggles are paid for by UNM, then these must be returned to the department and cannot leave the campus
 - iii. Individual can pay for or compensate the UNM for the previously purchased goggles.

Task	Eyewear Type	Location
<i>fill in task information.</i>	<i>Examples follow: Fill in eyewear type(s). (example included)</i>	<i>Fill in location where PPE is available.</i>
<i>Use of Corrosives</i>	<i>Safety goggles</i>	<i>Laboratory</i>
<i>Use of Hydrofluoric Acid</i>	<i>Splash proof goggles, and/or Face shield in accordance with agreed procedure</i>	<i>Laboratory</i>

B. Gloves

1. Nitrile gloves are approved for most acids
 - i. Casual handling
 - ii. Delineated by SDS
2. Refer to SDS if there is another type of glove
 - i. Delineated by SDS
 - ii. For use when full procedure is being performed
3. Hydrofluoric Acid required the use of nitrile and Silver Shield

Task	Glove Type	Location
<i>fill in task information.</i>	<i>Examples follow: Fill in glove type(s). (example included)</i>	<i>Fill in location where PPE is available.</i>
<i>Use of Corrosives</i>	<i>Nitrile unless SDS states otherwise</i>	<i>Laboratory</i>
<i>Use of Hydrofluoric Acid</i>	<i>Nitrile with Silver Shield</i>	<i>Laboratory</i>

C. Footwear

1. No sandals or open-toed shoes are to be worn by employees entering lab facilities. Shoes should have non skid soles and should have a reasonable heel height.
2. Safety shoes must be worn if there is potential for injury from heavy objects (e.g., handling drums, cylinders). The PI is responsible for procuring safety shoes if they are determined necessary.
3. Safety shoes must meet the requirements of ANSI Z41 (latest issue).

D. Clothing

1. Laboratory coats or other suitable work apparel shall be worn by laboratory employees whenever there is potential for chemical exposure in the work area.
2. Clothing must be cleaned regularly. If a spill occurs on the clothing, it must be decontaminated before reuse. Lab clothing should not be washed with other household clothing.
3. Disposable clothing should be considered when working with highly toxic materials, carcinogens, mutagens, or teratogens. The LS/PI is responsible for determining the need for disposable clothing.
4. Before each use, clothing is to be inspected for damage, deterioration, contamination. If deficiencies are noted, the clothing should be cleaned, repaired, or replaced before use.
5. Shorts will not be worn in the laboratory.

E. Hearing Protection

1. Hearing protection (earmuffs or plugs) is required whenever employees are exposed to noise levels of 85 decibels or greater as an 8-hour time weighted average (TW A).

Industrial Hygiene workers exposed to noise levels in excess of 90 dBA will wear hearing protection regardless of the duration.

2. Hearing protection is to be inspected before each use, for tears and contamination. If deficiencies are noted, the hearing protector should be cleaned, repaired, or replaced before use.
3. Annual audiogram and other requirements of the SRS Hearing Conservation Program apply if full-shift noise exposures are 85 decibels or greater. Please contact SRS for this program.

F. Respirators

1. Respiratory protection is not required for any routine work conducted in the laboratory.
2. Staff that are responsible for assessing chemical spill sites must ensure that they and other responders have respirators capable of controlling the particular chemical species and concentration. Emergency conditions (i.e., airborne contaminants in excess of established Immediately Dangerous to Life and Health concentrations) are to be handled by emergency response personnel.
3. All employees issued respirators for any reason must follow all the requirements set forth in the OSHA respirator protection program as EHS does not have one
4. Specific information concerning respirator capabilities, filter selection, IDLH concentrations, etc., is contained in the OSHA respiratory protection standard.

G. Storage

1. Corrosives should be stored in acid cabinets.
2. If Corrosives cabinets are not available, the plastic secondary containment should be provided
 - i. Secondary containment should be able to support 20% of the volume of the stored Corrosives in case of leaks
 - ii. Secondary containment can be placed in a flammable cabinet, but should not be stored near non-acid material
2. Corrosives should be stored away from:
 - i. Bases
 - ii. Water Reactive Material
 - iii. Organic and inorganic Corrosives should be stored separately. Stored separately can entail storing in separate containers if needed

H. Spill

1. Acid spill kit must be located and stocked in each lab
2. Any lab with Hydrofluoric Acids must have special Hydrofluoric acid spill kits (DO NOT USE NORMAL SPILL KITS ON HYDROFLUORIC ACID SPILLS)
3. Spill clean up procedure should follow EHS procedures.

G. Training:

1. Employees using PPE must be trained in proper selection, care and use. The PI is responsible for providing training for protective eyewear, footwear, gloves and clothing.
2. Users of respirators other than filtering face piece models must be trained annually by the SRS.

3. Users of hearing protection who are exposed to full-shift average noise levels over 85 dBA must be trained annually by the Department of Environmental Safety.
4. The PI is responsible for ensuring that respiratory protection and hearing conservation training are provided when employees have a demonstrated need for entry into these programs.
5. Personnel using Hydrofluoric Acid must take additional training.
6. Personnel using Perchloric Acid must take additional training.

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