

# UNIVERSITY OF CONNECTICUT HEALTH CENTER POLICY

## SELECTION and USE of PERSONAL PROTECTIVE EQUIPMENT (PPE)

(Eye, Face, Head, Foot and Hand)

### PURPOSE:

The purpose of this Policy is to prescribe procedures all Health Center Activities must follow for compliance with CT OSHA's Personal Protective Equipment (PPE) requirements [29CFR1910.132 to .138 (excluding .137 on electrical protective devices which must be complied with but has been exempted from OSHA's .132 (d) and (f) paragraphs on hazard assessment and training and .134 on respirators which are covered by a separate UCHC Policy)]. PPE items covered by this Policy include those for the protection of eyes, face, foot, head and hands from hazards such as from flying particles, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potential light radiation. The use of PPE for protection from bloodborne pathogens and laboratory hazards are covered by the **UCHC Policy for the Control of Employee Exposures to Bloodborne Pathogens** and/or the **UCHC Chemical Hygiene Plan**, respectively. The Research Safety Office (Environmental Health and Safety Office) is the point of contact for technical questions related to these Policies and the CT OSHA requirements. Because of the unique needs in Public Safety they may adopt their own PPE procedures provided these CT OSHA regulations are complied with and copies of their specific PPE compliance plans, selection lists and certifications are reviewed by and provided to the Research Safety Office.

### POLICY:

Where feasible, PPE devices alone should not be relied upon to provide protection against hazards, but should be used in conjunction with guards, engineering controls and prudent safety practices (e.g., **Chemical Hygiene Plan, Bloodborne Pathogen Exposure Control Plan, Permit Required Confined Spaces, Lockout/Tagout**, etc.). PPE when not covered by such other UCHC Policies or required for protection against additional hazards addressed by this Policy (e.g., impact hazard from flying fragments) will be selected and used in accordance with this Policy and the OSHA requirements.

### HAZARD ASSESSMENTS AND PPE SELECTION:

OSHA requires that employers review tasks performed by their employees and determine if hazards are present, or likely to be present, which necessitate the use of PPE. For every hazard where PPE is necessary for protection the employer must select the type(s) of PPE needed. A written certification must verify completion of such actions. The PPE Selection Table (Table 1) is based on general OSHA Guidance, an awareness of particular workplace hazards associated with most Health Center activities and a review of accident/incident reports. When laboratory chemical activities are covered in Table 1, the PPE selection has been based also on routine laboratory safety surveys conducted under the direction and/knowledge of the institution's chemical hygiene officer. Table 1 lists the type of protection (e.g., eye, face, head, foot and hand) to be used for many common tasks. It reiterates PPE requirements of the Health Center's **Chemical Hygiene Plan** and **Bloodborne Pathogen and Exposure Control Plan**. Activities are responsible for completing for their area(s) the Local PPE Survey described below of non-bloodborne pathogen exposure tasks, updating Table 1 for their activity, and completing the survey certification form(s) that documents these actions. Space has been left in the Table 1 for additions which are to be made to indicate the PPE item(s) selected when the local survey(s) identifies other tasks that require the use of specified PPE. For most clinical and administrative areas Table 1 should be comprehensive enough so that an appropriate supervisor need only review the selections in Table 1, verify that all tasks that might necessitate requiring PPE are covered, and complete the certification to

document that the local evaluation has been completed. Major activity heads (e.g., Hospital Director, Dean of the School of Medicine, Dean of the School of Dental Medicine, Associate Vice President for Finance, Chief Information Officer, Assistant Vice President for Research, etc.) are responsible for having their supervisor(s) evaluate/survey their activities as described below (**Local PPE Surveys**), complete the Local PPE Survey Certification, and inform their employees about the specific tasks requiring the use of PPE and the type PPE item(s) that must be used. See also **Training** and **Training Resources and Certification** below. Departments shall maintain their PPE Survey Certification(s) and forward a copy to the Research Safety Office (MC-3930) along with any Table 1 that had to be annotated locally so that it is readily available to employees and inspectors.

### **LOCAL PPE SURVEYS:**

Local surveys and assessments should be made by individuals selected because of their broad knowledge of the tasks performed by personnel in their area. The surveyor should follow the general guidelines outlined in Attachment 2, Appendix B (Appendix B is an OSHA non-mandatory Appendix). Special consideration should be given to evaluating non-routine tasks that may require PPE; evaluating tasks that may require PPE use because of multiple hazards; and, evaluating tasks that may require more than one item of PPE. The Health Center's **Exposure Control Plan for Bloodborne Pathogens** already covers PPE requirements for bloodborne pathogen exposures. Questions related to the survey and/or PPE selection should be referred to the Research Safety Office. When the survey has been completed the department will add to Table 1 specific tasks and selection decisions not otherwise included, complete the departmental certification, forward a copy to the Research Safety Office (MC-3930), and inform the employees of the PPE requirements. In many cases additions to Table 1 will not be needed. The certification section must, however, be completed for every department/activity to document completion of the survey.

### **COMFORT AND FIT OF PPE:**

Most PPE should be ordered from Property Management (Warehouse). In most cases Property Management can supply an appropriate item that will fit the user properly and comfortably. As the employer and in accordance with OSHA requirements, the Health Center may require employees to provide PPE that can be worn outside the workplace (it is recognized that in some cases this may be part of a collective bargaining agreement). When new equipment covered by this Policy is purchased it must meet applicable ANSI requirements as required by CT OSHA. PPE stocked by the Warehouse will meet these requirements. Gloves are not covered by ANSI Standards. For bloodborne pathogen exposure protection the selection of PPE should be based on the **UCHC Policy for the Control of Employee Exposures to Bloodborne Pathogens**. Questions on the selection of such PPE for bloodborne pathogen protection should be referred to the Environmental Health and Safety Office or the Epidemiology Office. Foot protection newly purchased must comply with ANSI Z41-1991 and Purchasing and/or Supervisors must make sure that when such foot protection is purchased by the Health Center or by an employee who is reimbursed in full or in part that the item complies with appropriate ANSI Z-41-1991 requirements. Newly purchased PPE items can only be used as required PPE when the item(s) conforms to the applicable ANSI Standard. See also **Specific PPE Requirements** below.

### **PRESCRIPTION AND CONTACT LENSES:**

Employees who wear prescription lenses while engaged in operations involving eye hazards shall normally be protected by eye protection that can be worn over prescription lenses without disturbing the proper position of the prescription or protective lenses. Contact lenses do not pose additional hazards to

the wearer, however contact lenses are not eye protective devices. If eye hazards are present, appropriate eye protection must be worn instead of, or in conjunction with, contact lenses.

### **TRAINING:**

Supervisors will enforce the use of required PPE, establish procedures to communicate to each affected employee information on PPE selection decisions, and train or coordinate the completion of PPE Training for their employees required to use PPE under this policy so that for required PPE they must use:

- The employee knows when PPE is necessary;
- The employee knows what PPE is necessary;
- The employee knows how to properly don, doff, adjust and wear PPE;
- The employee knows the limitations of PPE;
- The employee knows the proper care, maintenance, useful life and disposal of PPE; and
- The employee has demonstrated understanding of the above training and the ability to use PPE properly before being allowed to perform work requiring the use of PPE.

If the supervisor has reason to believe that a trained employee does not have the understanding and skill required above, the employee will be retrained before being allowed to perform work requiring the use of PPE. Such circumstances requiring retraining include: changes in the workplace that render previous training obsolete; changes in the types of PPE to be used render previous training obsolete; or inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee does not retain the requisite understanding or skill.

### **TRAINING RESOURCES AND CERTIFICATION:**

Upon requests from departments/activities and periodically the Research Safety Office (Environmental Health and Safety Office) will provide training programs on PPE items covered by this Policy and/or arrange for coverage of this topic in other programs, as appropriate. The Research Safety Office during such training will also verify and certify that the employee completing training has demonstrated an understanding of the training material. If activities accomplish this training its content and the documentation/certification process will be approved of by the Research Safety Office. Training on PPE used for exposure protection from bloodborne pathogens will continue to be given during initial and annual Bloodborne Pathogen Training with appropriate content and documentation for such training as agreed to by the Research Safety Office.

### **ISSUE OF PPE:**

Activities/Departments will determine how best to make required PPE items available to employees. Normally this will be at no cost to the employee, except for PPE that may be worn outside the workplace as described in the paragraph **Issue of PPE:**. In many situations, the issue of regularly used PPE items to the individual for their use and maintenance will be efficient. When issued to the individual, that employee must maintain PPE in working order and in a sanitary condition. Such individually issued PPE items must be readily available for use during all tasks requiring such use. Some Activities/Departments may determine that some or all of their PPE requirements can be met by centrally locating or centrally issuing PPE item(s) prior to the start of particular tasks. When reliance is placed on the central location or issue of any PPE items, the Activity/Department will establish procedures so that such items will be readily available (including second and third shifts and holidays), maintained in good working order and kept in a sanitary condition. For items issued centrally on an as needed basis

procedures need to require checks for serviceability and sanitation prior to use and upon the return of non-disposable items. Tasks requiring the use of PPE must be accomplished only when the required PPE is available, in good working order, in a sanitary condition and properly used by a trained individual.

**DEFECTIVE AND DAMAGED PPE:** Defective or damaged PPE shall not be used. Employees are responsible for the maintenance and sanitation of PPE items issued to or used by them. When cases for storage are issued with PPE, they should be used to protect PPE when it is not in use. Employees are responsible for the inspection of PPE items prior to use, using it for the purpose(s) it was selected, and not using or allowing the use of defective or damaged PPE. PPE that is damaged or defective will be replaced and disposed of by the employee in accordance with instructions from the supervisor.

### **RESPONSIBILITIES:**

- Activity and Department Heads will establish procedures to have this Policy implemented.
- Supervisors will verify that tasks requiring PPE have been identified and that employees have been informed of such PPE requirements. Supervisors will verify that employees have been trained on the proper use of the PPE they will be required to use and that such PPE items are available and properly used when required.
- Employees are responsible for knowing the type of PPE selected for the task(s) they perform and properly using such equipment when such tasks are accomplished. Employees will maintain PPE used or issued to them in good working condition and in a sanitary state and check the serviceability of required PPE items prior to use.
- Research Safety Office through the Environmental Health and Safety Office will provide consultations on PPE selection and use and upon request of the department(s) provide PPE training.

**ENFORCEMENT:** Failure of individuals to comply with this Policy and the OSHA requirements could result in disciplinary action up to and including dismissal.

**POLICY CHANGES:** Activities should send to the Research Safety Office any suggestions on changes needed to improve this PPE Policy.

### **SPECIFIC PPE REQUIREMENTS -**

#### **EYE AND FACE PROTECTION:**

- See 1910.133(a) through (b) which is attached for specific requirements.
- Eye and face PPE shall be distinctly marked to identify the manufacturer.
- Filter lenses for protection against radiant energy will conform to 1910.133(a)(5).
- Eye and face PPE devices purchased by the Health Center will conform to ANSI Z87.1-1989. Such devices purchased before July 5, 1994 may be used provided they comply with ANSI Z87.1-1968 or they have been demonstrated to the Research Safety Office to be equally effective.

## **HEAD PROTECTION:**

- See 1910.135(a) through (b) which is attached for specific requirements.
- Protective helmets purchased by the Health Center shall conform to ANSI Z89.1-1986. Protective helmets purchased prior to July 5, 1994 may be used provided they comply with ANSI Z89.1-1969 requirements, or have been demonstrated to the Research Safety Office to be equally effective.

## **FOOT PROTECTION:**

- See 1910.136(a) through (b) which is attached for specific requirement.
- Protective footwear shall comply with ANSI Z41-1991. Protective footwear purchased prior to July 5, 1994 may be used provided it complies with ANSI Z41-1967 or has been demonstrated to the Research Safety Office to be equally effective.

## **HAND PROTECTION:**

- See 1910.138(a) through (b) which is attached for specific requirement.
- The selection of the appropriate hand protection will be based on an evaluation of the performance characteristics of the hand protection relative to the tasks(s) to be performed, conditions present, duration of use, and the hazards and potential hazards identified. Questions on selection or use of hand protection should be referred to the Research Safety Office.

### Attachments:

1. Table 1 - PPE Selection List and Department/Activities Written Certification That a PPE Hazard Assessment Has Been Performed
2. Extract of OSHA PPE Regulations
3. Suggested Certification of PPE Training Form
4. List of Current PPE Warehouse Order Numbers. (For Bloodborne Pathogens also see the UCHC Exposure Control Plan).

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Leslie S. Cutler, D.D.S., Ph.D.  
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Executive Director

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Date

**TABLE 1**  
**PPE Selection List Including Department's Written Certification**  
**That a Hazard Assessment Has Been Performed**

**PART I - PPE SELECTION LIST (See Part II for Bloodborne Pathogens):**

**A. Eye and Face Protection List (See Notes Too):**

Task(s) Type Hazard	Assessment of Hazard	Protection
<p><u>IMPACT (General)</u></p> <ul style="list-style-type: none"> <li>• Using powered tools for work on metal, wood, plastic, etc. (e.g., sawing, lathe work, routing, drilling, sanding, etc.) (Examples include portable or fixed powered saws, drills and grinders/brushes to remove paint, metal, rust or other materials, use of abrasive wheels, etc.);</li> <li>• Doing similar hand chipping, grinding, machining work;</li> <li>• Doing woodworking, sawing, drilling, chiseling, when impact and flying object hazards could result in eye/face hazard;</li> <li>• Doing abrasive blasting or powered fastening and riveting (Examples include, use of explosive activated fastening tools and use of portable and bench grinders);</li> <li>• Using powered: lawn edging equipment, mowers, saws (e.g., chain), weed and brush trimmers, brush chippers, etc.;</li> <li>• Loading incinerators, ash removal and when incinerator is in use and chamber door is open;</li> <li>• Use of compressed air and powered liquid sprays when potential particle eye/face hazards exist;</li> <li>• Welding or brazing operations including surface preparation when impact from particles possible (See also <u>Light and/or Radiation</u> Section);</li> <li>• Compacting trash;</li> <li>• Drilling, cutting and working overhead when potential fragments, chips, particles could result in an eye hazard;</li>   <li>• Working on or with materials likely to shatter easily and result in impact eye hazards (e.g., replacing and disposal of fluorescent and thin glass bulbs, working on such objects from below, etc.);</li> <li>• Being in the area of strong air turbulence when the generation of airborne particles that could result in eye injury is likely (compressed air discharges, working in discharge air streams, being present in helicopter rotor downwash areas, etc.);</li> <li>• Using scrapers, loaders, dozers, graders, etc., under conditions and with materials that could result in airborne particulate hazards that might cause eye and face injury that reasonably could be expected to be prevented by use of such PPE;</li> <li>• Accomplishing activities when potential impact hazards exist and there is a reasonable probability of preventing injury when such PPE equipment is used;</li> <li>• Assisting in activities described above when exposed to the hazard.</li> </ul>	<p>Flying fragments, objects, large chips, particles, sand, dirt, etc. Use of both front and side protection is mandatory for protection against such flying objects. Side protection on spectacles may be provided by clip-on or slide-on devices provided the side protectors and glasses including frames meet applicable ANSI standards.</p>	<p>Spectacles with side protection (S) or goggles (G), or (S) or (G) with a faceshield (F). See notes (1), (3), (5), (6), (7), (8), (9), (10). For liquid exposures use goggles; for severe exposure, use eye and face protection in combination (e.g., goggles and faceshield).</p>
<p><u>IMPACT (Dental)</u></p> <ul style="list-style-type: none"> <li>• Using of air hammer, amalgamator, centrifugal casting machine, dental lathe, high speed grinder, high and low speed air driven hand pieces, low speed electric hand piece, model trimmer and sand blaster;</li> <li>• Assisting during the use of the above when exposed to</li> </ul>	<p>Flying fragments, chips, particles, etc. Both front and side protection is mandatory for protection against such flying objects. Side protection on spectacles may be provided by</p>	<p>Spectacles with side protection (S) or goggles (G), or (S) or (G) with a faceshield (F). See notes (1), (3), (5), (6), (7), (8), (9), (10). For liquid exposures use goggles (G).</p>

the hazard; or being in the immediate area of the above when exposed to the hazard.

#### IMPACT (Laboratory Activities)

(See also **Chemical Hygiene Plan**)

- Working with glass vacuum and pressure systems and containers not otherwise shielded or protected to prevent injury from flying particles;
- Using a reaction that has the potential for generating high temperatures, pressures;
- Conducting laboratory activities similar to those outlined above under IMPACT (General);
- Being in the immediate laboratory area of others required to wear such eye/face protection.

#### HEAT/COLD (General)

- Operating furnaces, pouring and casting hot metal, hot dipping, and welding;
- Loading incinerator, removing incinerator ash and being in the room when incinerator chamber door is open;
- Work on refrigerant, steam, high temperature systems, etc.;
- Work with cryogenic materials when splatter or splash potential is present (e.g., transfer);
- Unloading autoclave with hot liquid containers;
- Assisting during the above or being in the immediate area of the above when exposed to the hazard;
- Being in the immediate area where such hazards exist.

#### HEAT/COLD (Dental)

- Persons using autoclave, centrifugal casting machine, denture boil-out tank, dry ice dispenser, pressure pot, spot welder and steam cleaner.

#### HEAT/COLD (Laboratory)

- See HEAT/COLD (General) above;
- Work with high temperature or cryogenic materials when splatter or splash potential is present (e.g., transfer).

#### CHEMICALS (INDUSTRIAL and CLINICAL)

- Using corrosive and other hazardous chemicals (e.g., acids, caustics, irritants, etc.) when the potential for eye/face contact exists such as by splash or splatter exists that could cause tissue damage or injury upon contact (e.g., pumping, pouring or spraying of boiler treatment chemicals, caustic or corrosive cleaners; work on sewage pipes/traps, etc., when potential for splash or eye/face contact with liquid exists);
- Handling or maintaining lead acid batteries such as when filling with battery solution or water);
- Cleaning of chemotherapy drug spills when splash/splatter hazard exists;
- Use of glutaraldehyde mixtures and formalin when potential for eye/face contact exists;
- Transfer of liquid photographic solutions when potential for splash/splatter exists;
- Assisting during the above or being in the immediate area when exposed to the above hazard(s).

#### CHEMICALS (Laboratory)

(See Chemical Hygiene Plan)

clip-on or slide-on devices provided the side protectors and glasses including frames both meet applicable ANSI standards.

Flying fragments, flying glass, etc. Both front and side protection is mandatory for protection against flying particles. Side protection on spectacles may be provided by clip-on or slide-on devices provided the side protectors and glasses including frames meet applicable ANSI standards.

Hot sparks, flames or temperature extremes that may cause injury. High or ultra low temperature exposures.

Hot sparks, flames or temperature extremes that may cause injury.

Hot sparks, flames, or temperature extremes that may cause injury. For splash or splatter from molten or cryogenic materials use goggles and faceshield.

Potential direct or indirect splash, splatter or particulate contact with chemicals that could injure or cause tissue damage upon contact or by absorption.

For severe exposure, use eye and face protection in combination (e.g., goggles and faceshield).

Spectacles with the side protection (S) or goggles (G), or (S) or (G) with a faceshield (F). See notes (1), (3), (5), (6), (7), (8), (9), (10). For severe exposure, use eye and face protection in combination (e.g., goggles and faceshield). Where such injury hazards exist along with the potential for chemical contact wear goggles (G) and/or (G) and faceshield.

Spectacles with side protection (S) or goggles (G), or (S) or (G) with a faceshield. For severe exposure use faceshield with protective eyewear. For splash or splatter from molten or cryogenic materials use (G) or (S) and faceshield. See notes (1), (2), (3).

Spectacles with side protection (S) or goggles (G), or (S) or (G) with a faceshield. For severe exposure use faceshield with protective eyewear. See notes (1), (2), (3).

Spectacles with side protection (S) or goggles (G), or (S) or (G) with a faceshield. For severe exposure use faceshield with protective eyewear. See notes (1), (2), (3).

Goggles (G). For severe exposure (G) and face protection use faceshield too. See notes (3), (11).

• Performing, assisting in, or being in the immediate area where chemicals are stored or handled and the potential for eye injury exists.

Potential for eye/face contact with particles, drops, mist of chemicals that may result in injury.

For general low level protection when such hazards exist wear safety spectacles with sideshields. For laboratory work during the time with the potential for direct chemical eye contact such as a splash exists, use goggles (G) that are indirectly or non-vented. When contact with significant amounts of hazardous liquids exist wear indirectly or non-vented goggles as a minimum and a faceshield if a face hazard exists.

DUST

• Extremely dusty conditions.

Nuisance dust .....

Goggles. See note (8).

LIGHT and/or RADIATION (Welding)

• Electric arc

Optical radiation .....

Welding helmets or welding shields. Typical shades: 10-14. See notes (9), (12), ().

• Welding: Gas

Optical radiation .....

Welding goggles or welding faceshield. Typical shades: gas welding 4-8, cutting 3-6, brazing 3-4. See note (9), ().

• Cutting, Torch brazing, Torch soldering

Optical radiation .....

Spectacles or welding faceshield. Typical shades, 1.5-3. See notes (3), (9), ().

• Glare

Poor vision .....

Spectacles with shaded or special-purpose lenses, as suitable. See notes (9), (10), ().

LIGHT (Laser)

Protection from overexposure

Consult with Radiation Safety Office.

The type eye protection or system filter (S) with a wavelength specific optical density specified by Radiation Safety Office/Laser Safety Officer.

**Additions:**

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**Notes to Eye and Face Protection Selection Chart:**

- (1) Care should be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards should be provided. Protective devices do not provide unlimited protection.
- (2) Operations involving heat may also involve light radiation. As required by the standard, protection from both hazards must be provided.
- (3) For severe exposures faceshields should be worn over primary eye protection (spectacles or goggles).
- (4) As required by the standard, filter lenses must meet the requirements for shade designations in 1910.133(a)(5). Tinted and shaded lenses are *not* filter lenses unless they are marked or identified as such.



- (5) As required by the standard, persons whose vision requires the use of prescription (Rx) lenses must wear either protective devices fitted with prescription (Rx) lenses or protective devices designed to be worn over regular prescription (Rx) eyewear.
- (6) Wearers of contact lenses must also wear appropriate eye and face protection devices in a hazardous environment.
- (7) Caution should be exercised in the use of metal frame protective devices in electrical hazard areas.
- (8) Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleansing may be necessary.
- (9) Welding helmets or faceshields should be used only over primary eye protection (spectacles or goggles).
- (10) Non-sideshield spectacles are available for frontal protection only, but are not acceptable eye protection for the flying object type hazards listed under Impact.
- (11) Ventilation should be adequate, but well protected from splash entry. Eye and face protection should be designed and used so that it provides both adequate ventilation and protects the wearer from splash entry.
- (12) Protection from light radiation is directly related to filter lens density. See note (4). Select the darkest shade that allows task performance.
- (13) See 29CFR1910.133(a)(5)

## **B. Foot Protection:**

<b>Source</b>	<b>Assessment of Hazard</b>	<b>Protection</b>
Falling or Rolling Objects - Heavy equipment moving, jack hammer use, etc.	Exposure to Objects Falling on or compressing foot	ANSI Footwear for Impact (I) and Compression (C) Protection (I&C)(1), (2).
Object Piercing Sole	Exposure to objects that are likely to pierce sole of shoe (1)(2)	ANSI Footwear for puncture resistance (PR)(1),(2).
Electrical Hazard to Feet	Electrical contact and electrical conduction.	ANSI Footwear for electrical conductive hazard (EH)(1), (2).

### **Notes:**

- (1) Consult Environmental Health and Safety Office on the ANSI required marking to be in shoe.
- (2) If more than one hazard, protective footwear worn must meet all ANSI requirements for the anticipated identified hazards.
- (3) Aluminum alloy, fiberglass, or galvanized steel footguards can be worn over usual work shoes, although they may present the possibility of catching on something and causing worker to trip.

### **Additions:**

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## **C. Head Protection:**

<b>Source</b>	<b>Assessment of Hazard</b>	<b>Protection</b>
Falling Objects (From <u>directly</u> above)	Warehouse, demolition, maintenance and repair activities when such impact hazards from <u>directly</u> overhead are present (e.g., tree trimming, removal of objects directly overhead, etc.)	ANSI head protection (hard hat). Generally, Class B Type (2). Consider procedures that would minimize presence of personnel in direct falling object zone.
Moving Objects	Warehouse, demolition maintenance and repair activities when such head impact hazards are present.	ANSI head protection (hard Hat). Generally, Class B Type (2).
Exposed Electrical Conductors	Exposed and energized electrical conductors could be contacted by head or protective helmets and cause electrical shock or burns. Maintenance, Telecommunications, etc.	ANSI head protection (hard hat). Generally, Class B Type (2).
Fixed Object Head Contact	Hazard not abutted by use of above PPE requirements.	Consider use of hazard identification and padding object to

minimize the hazard or use of one of the above head protection devices.

**Additions:**

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**Notes:**

See for electrical service also 29CFR1910.137.

**D. Hand Protection:**

Source	Assessment of Hazard	Protection
<p><u>CHEMICALS, INDUSTRIAL INCLUDING MAINTENANCE and HOUSEKEEPING and CLINICAL</u></p> <ul style="list-style-type: none"> <li>• Handling and transfers of acids, bases, corrosives, etc.;</li> <li>• Handling materials that could cause severe hand abrasions, cuts or lacerations;</li> <li>• Handling materials that could cause burns (thermal or from cryogenic materials) to hands;</li> <li>• Work with radioactive materials for contaminant protection of hands.</li> </ul>	<p>Potential for direct exposure with hazardous chemical that could on contact cause skin injury or by absorption illness.</p>	<p>Industrial glove selected by user based on vendor information that the style, material and thickness of the glove will provide required protection, or glove selected by the Environmental Health and Safety Office for the anticipated hazards (1) or by the Radiation Safety Office when the anticipated hazard is radioactive materials (1).</p>
<p><u>CHEMICAL LABORATORY ACTIVITIES</u></p> <ul style="list-style-type: none"> <li>• Exposure of hands to hazards such as from skin contact or absorption of hazardous substances;</li> <li>• Use of radioactive material with the potential for hand contamination.</li> </ul>	<p>Direct hand contact with laboratory chemicals when such exposures will cause skin damage or illness by contact/absorption.</p>	<p>For situations where contact would be only incidental and to small quantities the use of thin disposable gloves may be appropriate provided at any indication of contact the glove is promptly removed and the hands washed. For other situations (e.g., hand/glove wetted with chemical) select glove style, make and material for its resistance to the chemical(s) or by consultation with the Environmental Health and Safety Office.</p>

**Additions:**

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**Notes:**

- (1) Disposable examination and surgical gloves are not normally appropriate.
- (2) Examination and surgical gloves may be used in very limited laboratory circumstances when potential exposures with hazardous materials would be brief and intermittent and the user shall quickly remove gloves upon such accidental contact and wash hands prior to continuing the work.
- (3) See for electrical service also 29CFR1910.137.

**PART II BLOODBORNE PATHOGEN PPE SELECTION LIST (See also UCHC Exposure Control Plan for Bloodborne Pathogens):**

(Extract from UCHC Exposure Control Plan for Bloodborne Pathogens)

Procedure	Hand Washing	Gloves	Gown/ Plastic Apron	Mask	Eye Protection
Bath (open lesions)	X	X			
Bath, routine (skin intact)	X				
Bleeding, pressure application to control	X	X	S	*	*
Blood glucose (capillary), testing	X	X			
Breathing treatment, routine	X	S			
Changing visibly soiled beds	X	X	S		
Cleansing, anal	X	X			
Cleanup of:					
Incontinent patient (feces)	X	X	S		
Incontinent patient (urine)	X	X			
Spills of blood/body substances	X	X	S		
Surfaces contaminated by blood/body substances	X	X	S		
CPR	X	X			
CVP measurement	X	X			
Decubitus care	X	X			
Dialysis, peritoneal:					
Initiation of acute treatment	X	X	S	*	*
Performing an exchange	X	X	S	*	*
Termination of acute treatment	X	X	S	*	*
Setting up tubing to cyclor	X				
Dismantling tubing from cyclor	X	X	S	*	*
Addition of medications to dialysate solution	X				
Discarding peritoneal drainage	X	X	S	*	*
Irrigation of peritoneal catheter	X	X	S	*	*
Specimen collection	X	X			
Tubing change	X	X	S	*	*
Skin care (catheter site)	X	X		X	X
Assisting with insertion of acute peritoneal catheter (outside sterile field)	X	X	S	*	*
Accidental disconnection from cyclor (wash hands immediately after exposure)	X				
Dressing change, burn	X	X	S		
Dressing removal/change for wounds with little or no drainage	X	X			
Dressing removal/change for wounds with large amount of drainage	X	X	S		
Emptying drainage receptacles, including suction containers, urine receptacles, bed pans, emesis basins	X	X	S	*	*
Emptying wastebaskets	X	X			
Enema	X		S		
Fecal impaction, removal of	X	X			
Fecal incontinence, placement of and emptying bag	X	X	*		
Feeding patient	X				
Gastric lavage	X	X	S		
Intravenous/intraarterial:					
Initiation	X	X			
Termination	X	X			
Tubing change at hub of catheter	X	X			
Irrigation:					
Foley	X	X			
Vaginal	X	X	S		
Wound	X	X	S	*	*

Procedure	Hand Washing	Gloves	Gown/ Plastic Apron	Mask	Eye Protection
Medication administration:					
Eye, ear, and nose drops	X	X			
Intramuscular/subcutaneous	X	X			
Intravenous:					
Direct or into hub of catheter/Heplock <sup>R</sup>	X				
Piggyback	X				
Oral, nurse administered:					
Handed to patient	X				
Placed in patient's mouth by nurse	X	X			
Rectal/vaginal suppository	X	X			
Topical medication to intact skin	X				
Topical medication to lesion	X	X			
Nasogastric tube, insertion/irrigation	X	X	S	*	*
Oral/nasal care	X	X			
Ostomy care, irrigation and teaching	X	X	S		
Oxygen:					
Draining of tube condensate	X	S			
Placing of cannula or mask	X				
Perineal cleansing	X	X			
Physical assessment	X				
Pleur-evac <sup>R</sup> change	X	X	*		
Care	X	X	S		
Transportation of body in shroud	X				
Pulse oximetry	X				
Shaving	X	X			
Sitz bath	X				
Specimen collection (blood, stool, urine, sputum, wound)	X	X			
Suctioning:					
Nasotracheal or endotracheal	X	X	S	*	*
Oral/nasal	X	X			
Temperature, rectal	X	X			
Trach care (suctioning and cleansing of cannula)	X	X	S	*	*
Traction	X				
Tube feeding	X				
Urine/stool testing	X	X			
Vital signs (oral temperature, pulse, respiration, blood pressure)	X				
Washing hair	X				
Wound packing	X	X	S		
Assisting with:					
Central line insertion/venesection (cut down)	X	X			
Cervical cauterization	X	X			
Chest tube insertion	X	X	S	*	*
Chest tube removal	X	X	S	*	*
Colonoscopy, flexible sigmoidoscope	X	X			
Incision and drainage of abscess	X	X	*		
Intubation/extubation	X	X	*	*	*
Invasive procedures (lumbar puncture, bone marrow aspiration, paracentesis, liver biopsy, outside sterile field)	X	X			
Joint/nerve injection	X	X			
Lesion biopsy/removal	X	X			
Pelvic exam and Pap smear	X	X			
Tracheostomy tube change	X	X		*	*

**LEGEND:**

X = Routinely S - If soiling is likely \* - If splattering is likely

**PART III ACTIVITY/DEPARTMENT CERTIFICATION OF PERSONNEL PROTECTIVE  
EQUIPMENT ASSESSMENT IAW 29 CFR 1910.132(d)(2)**

1. **Activity/Department:** \_\_\_\_\_
2. **Person(s) Performing PPE Assessment:** \_\_\_\_\_
3. **Date of Hazard Assessment Completion:** \_\_\_\_\_
4. **Date of Certification:** \_\_\_\_\_
5. **Printed Name of Certifying Individual:** \_\_\_\_\_
6. **Signature of Certifier:** \_\_\_\_\_

Original Part III - Kept by Department/Activity

Copy Part III - Forward to Research Safety (MC-3930)

**CERTIFICATION OF EMPLOYEE TRAINING IN PPE USE  
PURSUANT TO 29 CFR 1910.132**

I, \_\_\_\_\_, certify that on \_\_\_\_\_  
(name of individual) (Date)

the following employees of the \_\_\_\_\_ received training under OSHA's  
(Dept./Ext.)

standard on personal protective equipment:

**(Printed Employee Names:)**

_____ (employee)	_____ (employee)
_____ (employee)	_____ (employee)
_____ (employee)	_____ (employee)
_____ (employee)	_____ (employee)
_____ (employee)	_____ (employee)
_____ (employee)	_____ (employee)

As part of this training, employees were informed of the personal protective equipment selected by this office for their use. I further certify that each employee listed above has demonstrated his/her understanding of this training.

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
(date)

# Common Personal Protective Equipment Items Order From Warehouse

## Eye & Face Protection

1.       **Safety Glasses with Side Shield**  
Clear, 4-Way Adjustable Temple, ANSI Z87.1-1989  
Bilsom, Dakota, Part #GL6158 (Made to fit comfortably over Rx spectacles)  
Warehouse Order # 85400, approx. cost - \$1.21 each
  
2.       **Safety Glasses with Side Shield**  
Clear, ANSI Z87.1-1989  
Cabot-Tour Guard III, Part #A041110, (Made to fit over Personal Glasses, High Impact Resistant Polycarbonate), Warehouse Order # 85401, approx. cost \$ .89 each
  
3.       **Safety Glass Case**  
For 1 and 2 Above  
Cabot 45813-00000, Warehouse Order #95460, approx. cost \$1.35 each
  
4.       **Goggles**  
Chemical and Impact, Indirect Vents, Clear, ANSI Z87.1-1989  
Cabot-Goggles, Part #A0484-B, Warehouse Order # 85700, approx cost \$3.10 each
  
5.       **Goggles**  
Impact Only, Perforated, Soft Side, ANSI Z87.1-1989  
Cabot-Goggles, Part #A0482B, ANSI 87.1-1989, # 85701, approx cost \$2.38 each
  
6.       **Goggle Carrying Case**  
For 4 and 5 above  
Goggle Case, Part # Abern, Warehouse Order # 85702, approx. cost \$5.35 each
  
7.       **Cleaning Station for Eyeglasses/Goggles**  
(Disposable, 8 oz. liquid, 600 tissues)  
BEST - Anti-Fog/Anti-Static, Warehouse Order # 85703, approx. cost \$5.08 each
  
8.       **Cleaning Station for Eyeglasses/Goggles**  
Box of 100 Pre-moistened Towelettes  
BEST, Part #94, Warehouse Order #85704, approx. cost \$6.80 each
  
9.       **Faceshield**  
# OK-170-S Ratchet Headset # OK-8060, Warehouse #85706, approx. cost \$4.67 each;  
Faceshield, Warehouse Order #85706, approx. cost \$6.79 each (Order both for functional unit)

## **Head Protection**

### 1. **Hard Hat**

Class A, B, White, Ratchet 4 Point Suspension, ANSI Z89.1-1986  
Bullard, 5100R-W, Warehouse Order # 85707, approx. cost \$6.93 each

## **Foot Protection**

When required, new items must comply with applicable ANSI Z41-1991 requirements  
(Consult UCHC PPE Policy and/or Environmental Health and Safety Office)

## **Hand Protection**

(No ANSI Standards, list below is limited and is only offered as a starting point, See Caution Statement Below)

- For Bloodborne Pathogens Refer to UCHC Exposure Control Plan
- For High Temperature (e.g., autoclave processing) and Cryogenic Material Insulation consider Higher Heat Level Gloves, Glass Cloth, 35 oz., Wool Lined with Kevlar Thread, SG GL-210-14F, Warehouse # 85711, approx. cost \$19.11 pair
- For Acid Resistance, consider Neoprene 18 mil, Twyman-Templeton, 14", embossed, #00NE-418, Specify Size 6-11, Warehouse # 85712, approx. cost \$2.46 pair
- Cotton, 8 oz. glove, e.g., Men's or Women's, Women's Warehouse # 85708, approx. cost \$.63 pair, Men's Warehouse # 60045, approx. cost \$1.67 pair
- Leather Palms, knit wrist gloves for men, Warehouse # 60046, approx. cost \$2.25 pair, or for ladies, Warehouse # 85709, approx. cost \$.79 pair
- Welder's Glove - select from Industrial Catalog and/or contact Environmental Health and Safety office for Information

(Note: Caution, for selection of gloves, especially chemical protective gloves, consult with Environmental Health and Safety Office. Be especially careful with any loose fitting item worn around operating/rotating mechanical equipment.)

## **Other Items**

### **White Vinyl Apron**

20 mil, 35" x 45"

(Twyman-Templeton #CBPVC-45) Warehouse Order # 85710, approx. cost \$3.19 pair)