
UCLA Policy 905: Research Laboratory Personal Safety and Protective Equipment

Issuing Officer: Vice Chancellor for Research
Responsible Dept: Environment, Health & Safety
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I. PURPOSE AND SCOPE

The University of California (“University”) is committed to providing a healthy and safe environment and workplace for all members of the University community. It is University policy to comply with all applicable health, safety and environmental protection laws, regulations and requirements. The Occupational Safety and Health Administration (OSHA) ensures workplace safety through the enforcement of established federal legislation, and the California Division of Occupational Safety and Health (Cal/OSHA) operates as the acting regulatory enforcement body under the direction of the OSHA act.

Title 29 of the Code of Federal Regulations, Part 1910, Subpart 1. *Personal Protective Equipment*, states that “protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radioactive materials, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.” Pursuant to this regulation, and in an effort to prevent workplace injuries and illnesses, UCLA has established this Policy regarding Personal Protective Equipment (PPE) safety requirements for any individual, including but not limited to principal investigators, lab supervisors, staff, students, volunteers, and visitors entering and/or working in a UCLA research or teaching laboratory.

II. DEFINITION OF HAZARDOUS MATERIALS

For the purposes of this Policy, the following are defined as hazardous:

1. Any unsealed radioactive material.
2. Biological materials as defined in the scope of the UCLA Institutional Biosafety Plan that require BSL-2 containment or higher. (See Section VI. References).
3. Biohazardous materials and recombinant or synthetic nucleic acid molecules in research and teaching activities as outlined in UCLA Policy 992 (see Section VI. References).
4. Chemicals listed as Select Carcinogens and Regulated Carcinogens (see <http://www.dir.ca.gov/Title8/5191.html> for the Cal/OSHA criteria for select carcinogens).

5. Chemicals listed as Reproductive Toxicants (see <https://oehha.ca.gov/proposition-65/proposition-65-list>) for a list of reproductive toxicants and carcinogens identified under California Proposition 65).
6. Chemicals listed as Toxic or Highly Toxic (see http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10100 for OSHA guidance on identifying Highly Toxic Chemicals).
7. Flammable, air-reactive or water-reactive chemicals.
8. Corrosive chemicals in concentrations of one (1) normal or greater.
9. Known significant skin or eye irritants.

This list is to be used as a guideline and allows for some laboratories to be classified as non-hazardous materials use areas (see B., below); it does not supersede Cal/OSHA regulations or accepted safe work practices for specific materials. PPE and other safety measures, as appropriate, must be used to protect lab personnel from any and all known hazards that are present in all work-related activities at UCLA. Refer to the California Code of Regulations 5191 for additional guidance in developing protective measures for laboratory use of Hazardous Materials.

III. POLICY STATEMENT

The PPE safety requirements outlined in this Policy (see A., below) pertain to all research and teaching laboratory environments using Hazardous Materials and serve as minimum requirements to be fulfilled under general conditions. Given the diversity of research performed across laboratory groups and the campus, principal investigators and lab management, in accordance with applicable Cal/OSHA regulations and University policies, are to exercise judgement and discretion in the proper selection, provision, implementation, and maintenance of PPE specific to laboratory operations. EH&S will provide guidance and consultation on these matters to support laboratories and the campus community.

The PPE safety requirements do not apply to laboratories which have been designated as non-hazardous materials use areas (see B., below) and do not apply to research and teaching laboratories that involve solely mechanical, computer, laser, other non-ionizing radiation or electrical operations; these hazards will be addressed under separate policies and/or the UCLA Office of Environment, Health & Safety (EH&S) safety manuals, as appropriate.

A. PPE Safety Requirements

1. Full-length pants (or equivalent garment of adequate thickness/protective barrier) and closed-toe shoes will be worn at all times by all individuals that enter a laboratory area. The area of skin between the shoe and ankle will not be exposed.
2. Protective gloves must be worn while utilizing any hazardous chemical, hazardous biological or unsealed radioactive material. Flame-resistant glove liners are required when handling pyrophoric materials. Gloves must be appropriate for the material being used. The Safety Data Sheet (SDS) for the material should be referenced when determining the effectiveness of the type of glove to be used. The EH&S website (www.ehs.ucla.edu) offers guidance on glove selection based on material handling, as well as links to other resources. If work is being done with an open flame or other heat source strong enough to melt the glove materials and no Hazardous Materials are being handled, glove use should be avoided. The principal investigator/lab supervisor will consult with the appropriate campus committees and/or designated authorities.
3. Protective gloves must not be allowed to touch any public areas or common-use items such as door knobs/handles, elevator buttons, etc. Therefore, gloves used for laboratory work should not be worn outside of the laboratory except when a glove is required to safely transport Hazardous Materials. In these cases, workers should keep one hand ungloved so that they can open doors, touch elevator

buttons, etc. Additionally, gloves should be removed prior to handling any equipment likely to result in cross-contamination (e.g., cellphones, computer work stations, etc.).

4. Laboratory coats, or equivalent, are required to be worn while working on, or adjacent to, all benchtop procedures utilizing hazardous chemical, hazardous biological or unsealed radioactive materials. These laboratory coats must be appropriately sized for the individual and be buttoned to their full length. Laboratory coat sleeves must be of a sufficient length to prevent skin exposure while wearing gloves.
5. Flame-resistant laboratory coats must be worn when working with pyrophoric materials and flammable liquids near ignition sources. Flame-resistant laboratory coats must also be worn when working with flammable liquids in amounts that pose a greater than *de minimis* (insignificant) risk as assessed by designated lab personnel and/or in consultation with EH&S. It is recommended that cotton (or other non-synthetic material) clothing be worn during these procedures to minimize injury in the case of a fire emergency. This requirement does not apply when working with pyrophoric materials that are contained within a glove box where an inert atmosphere is maintained.
6. Laboratory coats may not be worn outside of a laboratory unless the individual is traveling directly to an adjacent laboratory work area. Any travel that requires moving to another building or transferring floors is not considered adjacent and requires lab coat removal.
7. Each department or research unit will be responsible for providing professional laundry services to maintain the hygiene of laboratory coats. Laundering services will be complimentary to laboratory personnel (unless deemed otherwise by internal policy, required by academic curriculum purchase agreements, or equivalent). PPE may not be cleaned by staff members or students at private residences or public laundry facilities. Any clothing that becomes contaminated with Hazardous Materials must be decontaminated before it leaves the laboratory.
8. Appropriate eye protection or equivalent engineering controls must be used while handling any hazardous chemical, hazardous biological or unsealed radioactive materials. All eye protection equipment must be American National Standards Institute (ANSI) approved and appropriate for the work being done.
9. Some operations and procedures may warrant further PPE as indicated by the SDS, the standard operating procedures for the material being used, facility policies, regulatory requirements, the laboratory's hazard assessment(s), and/or additional UCLA policies that may apply (see Section VI. References). In such instances, the principal investigator/lab supervisor will consult with the appropriate campus committees and/or designated authorities.
10. Principal investigators and/or laboratory supervisors will adhere to the responsibilities outlined below and evaluate PPE on an ongoing basis to ensure that it does not create additional undue risks in the laboratory (e.g., through reduced dexterity, vision or hearing).

B. Non-Hazardous Materials Use Area Approval

In order to qualify as a non-hazardous materials use area, a laboratory must request and obtain approval and appropriate labeling from EH&S. EH&S, in cooperation with regulatory mandates and institutional safety committees, has the final authority for determining whether any specific material is classified as hazardous. Deviations from these requirements, including the defining of specific Hazardous Materials use areas within rooms, may be permitted under certain conditions and require written approval from EH&S.

C. Exemptions

Any departure or deviation from this Policy requires written pre-approval from EH&S and/or the relevant institutional safety committee(s).

IV. RESPONSIBILITIES

Preventing workplace injuries and illnesses is the responsibility of every member of the campus community. Specific responsibilities are assigned to designated campus authorities and members of the research and teaching community in order to implement and ensure compliance with this Policy.

The Chancellor has overall responsibility for compliance with health and safety requirements at all facilities and programs under campus control.

The Vice Chancellor for Research is responsible for the implementation of this Policy in all applicable research and teaching laboratories within the Vice Chancellor's jurisdiction.

Department chairpersons are responsible for communicating, promoting and enforcing the Policy in their respective research and teaching areas.

Principal investigators and laboratory management staff are responsible for complying with this Policy. Responsibilities include ensuring that staff, students and volunteers: (1) receive appropriate training (as outlined in the UCLA Injury and Illness Prevention Program, UCLA Chemical Hygiene Plan, and the [UCLA Lab Safety Training Matrix](#)) prior to performing work and (2) are provided with and utilize the appropriate PPE pursuant to this Policy and lab-specific Standard Operating Procedures (SOPs) as it relates to their research and teaching activities.

All staff, students, volunteers and visitors entering and/or working in laboratory areas are responsible for complying with this Policy, following laboratory safety requirements and for wearing PPE as outlined in this Policy, and completing the laboratory-specific safety training.

The UCLA Office of the Vice Chancellor for Research Safety Oversight Committee (OSOC) is responsible for promoting a safe working environment in all research and teaching laboratories on campus.

The UCLA Office of Environment, Health & Safety (EH&S) is responsible for the evaluation and/or inspection of laboratories and enforcement of this Policy. In cases where laboratory activities pose an immediate danger to life or health, designated EH&S staff have the responsibility and authority to order the temporary cessation of the activity until the hazardous condition is abated. EH&S will provide guidance on the appropriate corrective actions that will be taken to ensure activities accede to Cal/OSHA mandates, UCLA policies, and best practices as recommended by the OSOC.

V. REFERENCES

1. University of California Policy on Personal Protective Equipment
2. University of California Policy on Management of Health, Safety and the Environment
3. UCLA Policy 811, Environmental Health and Safety
4. UCLA Policy 990, Use of Animals in Research, Teaching, and Testing
5. UCLA Policy 992, Use of Biohazardous Materials and Recombinant or Synthetic Nucleic Acid Molecules in Research and Teaching Activities
6. Code of Federal Regulations, Title 29 CFR, Part 1910, Subpart 1
7. California Code of Regulations – Subchapter 7. General Industry Safety Orders – Group 16. Control of Hazardous Substances – Article 109. Hazardous Substances and Processes - §5191. Occupational Exposure to Hazardous Chemicals in Laboratories

8. UCLA Laser Safety Manual <https://ucla.app.box.com/v/LaserSafetyManual>
9. UCLA Institutional Biosafety Plan <https://ucla.app.box.com/v/UCLA-Biosafety-Plan>
10. UCLA PPE Selection Guide <https://ucla.app.box.com/v/ehs-ppe-selection-guide>

Issuing Officer

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Vice Chancellor for Research

**Questions concerning this procedure should be referred to
the Responsible Department listed at the top of this document.**
