Body Protection including Laboratory Coats and Other Protective Clothing

Employees may be required to wear additional clothing to protect their body from workplace hazards and exposures. Many types and forms of clothing exist to give employees additional protection from workplace hazards. Therefore, it is important to select protective clothing based on the type of hazard and/or tasks performed in the work area.

All protective clothing is required to be removed prior to leaving the work areas. Non-disposable or reusable protective clothing should be professionally cleaned and/or laundered.

Laboratory coats and shoes must be worn when performing laboratory work when working with hazardous materials (open toed-shoes, sandals, flip-flops, clogs, crocs, etc. are prohibited). Depending on the type of work, additional personal protective equipment, such as gloves or clothing for thermal protection, face shields, or aprons may be necessary. Appropriate PPE for laboratory work must be worn to address all anticipated hazards. Laboratory coats and other protective clothing are essential for protection from chemical splashes and splatters, or contamination with radioactive or biohazardous agents. Long sleeved, full-length lab coats or gowns should be worn to protect skin and street clothing from contamination. All protective coats should adequately protect from the hazardous agents used. In general, coats made of 100% cotton are utilized for work with flammable/combustible liquids, radioactive materials, biological agents and mildly corrosive substances. Synthetic material lab coats must NOT be worn if there is a potential of a fire. Flame retardant laboratory coats (for example Nomex, Indura, Excel) must be worn for work with pyrophoric chemicals. If cotton coats that have been treated to make them flame resistant are employed, researchers must note that the chemical treatment is degraded through multiple washings. Aprons, corrosives-resistance coats, or additional protection may be required for work with concentrated corrosives or toxic chemicals.

For the sake of safety, appearances, and courtesy, do not wear contaminated, stained, or potentially contaminated lab coats and other research clothing and equipment outside of the laboratory. In accordance with OSHA regulations, laundering of protective clothing is the employer’s responsibility. Contaminated lab coats should not be cleaned at home to avoid contamination of the home environment. A professional cleaner should be employed for cleaning of protective coats, gowns and scrubs, or lab coats may be laundered on campus in departments that have access to laundering facilities for clothing that may be incidentally contaminated. Clothing or laboratory coats that have been contaminated by splashes or spills should be discarded or decontaminated before cleaning. If a professional cleaner is utilized, they must be informed of the names of any agents that may have contaminated the lab coats.

- Clothing contaminated with biohazardous material must be autoclaved prior to laundering
- Clothing that is overtly contaminated with hazardous chemicals must be discarded as hazardous waste.
- Clothing contaminated with radiological material may require quarantine and decay or disposal as radiological waste. Contact the Radiation Safety Officer for guidance at 644-8802.
- The use of disposable gowns and coats should be considered for laboratory work wherein a splash or overt contamination may render a lab coat unsafe to launder.

Selection guidelines for body protection

Employees who face possible bodily injury of any kind that cannot be eliminated through engineering, work practice or administrative controls, must wear appropriate body protection while performing their
jobs. In addition to cuts and radiation, the following are examples of workplace hazards that could cause bodily injury:

- Temperature extremes.
- Hot splashes from molten metals and other hot liquids.
- Potential impacts from tools, machinery and materials.
- Hazardous chemicals.

There are many varieties of protective clothing available for specific hazards. Supervisors are required to ensure that their employees wear personal protective equipment only for the parts of the body exposed to possible injury. Examples of body protection include laboratory coats, coveralls, vests, jackets, aprons, surgical gowns and full body suits.

If a hazard assessment indicates a need for full body protection against toxic substances or harmful physical agents, the clothing should be carefully inspected before each use, it must fit each worker properly and it must function properly and for the purpose for which it is intended.

Employees, whose duties are regularly performed in high traffic areas where they are exposed to the danger of moving vehicles, must wear ANSI-approved high-visibility vests.

Protective clothing comes in a variety of materials, each effective against particular hazards, such as:

- **Paper-like fiber** used for disposable suits provide protection against dust and splashes.
- **Treated wool and cotton** adapts well to changing temperatures, is comfortable, fire-resistant and protects against dust, abrasions and rough and irritating surfaces.
- **Duck** is a closely woven cotton fabric that protects against cuts and bruises when handling heavy, sharp or rough materials.
- **Leather** is often used to protect against dry heat and flames.
- **Rubber, rubberized fabrics, neoprene and plastics** protect against certain chemicals and physical hazards. When chemical or physical hazards are present, check with the clothing manufacturer to ensure that the material selected will provide protection against the specific hazard.

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**Additional Resources and Information**

- [Demonstration of lab coat materials set on fire](#)