

Laboratory Safety

Policy:

All DHS facilities must ensure that laboratory employee exposures to hazardous substances and infectious agents are properly evaluated, quantified, documented, and below the permissible exposure level.

Authority:

- 29CFR1910.132 General Requirements (Personal Protective Equipment)
- 29CFR1910.133 Eye and Face Protection
- 29CFR1910.134 Respiratory Protection
- 29CFR1910.151 Medical Services and First Aid
- 29CFR1910.1020 Access to Employee Exposure and Medical Records
- 29CFR1910.1030 Occupational Exposure to Bloodborne Pathogens
- 29CFR1910.1450 Occupational Exposure to Hazardous Chemicals in Laboratories
- MS182.653 Rights and duties of employers
- MS182.6555 Reducing occupational exposures to bloodborne pathogens through sharps injuries
- Minnesota Rules Chapters 5205 and 5206 Employee Right to Know

Purpose:

To ensure that lab employees are knowledgeable about laboratory operations, and are not exposed to infectious agents or hazardous chemicals at concentrations above the permissible exposure level (PEL) or the threshold limit value (TLV).

Definitions:

Action level: A chemical exposure level at or above which specific regulatory actions are required.

Chemical hygiene officer: A designated employee who is qualified by training or experience to provide technical guidance in the development, application and review of the Chemical Hygiene Plan.

Chemical hygiene plan (CHP): A written program developed and implemented by each lab that documents how employees will be protected from specific chemical health hazards.

Hazardous chemical: A chemical for which there is evidence of adverse health effects among exposed employees. Hazardous chemicals include those listed in Minnesota Rules part 5206.0400.

Infectious agent: A communicable bacterium, rickettsia, parasites, virus or fungus, which, according to medical or scientific evidence, causes acute or chronic illness or permanent disability as a foreseeable and direct result of exposure to the infectious agent.

Laboratory: A facility in which the use of hazardous chemicals occurs on a nonproduction basis.

Material Safety Data Sheet (MSDS): A data sheet that contains information required under Minnesota Statutes, Section 182.655, subdivisions 4b, 4c, and 4e regarding the physical, chemical, and hazardous properties of a substance or mixture.

Permissible Exposure Level (PEL): The OSHA regulatory amount of a substance to which an employee may be exposed.

Threshold Limit Value (TLV): Guidelines to control chemical exposures published by the American Conference of Governmental Industrial Hygienists.

Responsibilities/Procedures:

Site administrator or designee: Establish procedures, assign a chemical hygiene officer, obtain required equipment and ensure that is operational, to effectively implement this policy.

Safety Administrator: Assist laboratory employees with a laboratory chemical survey, ensure that hazardous chemicals have a MSDS and consult with CHP preparation.

Measure and document laboratory employee exposures to hazardous lab chemicals. Reasonable judgment may be used instead of monitoring chemical exposures when, because of usage, process, or laboratory equipment, employee exposures are obviously below any action or PEL.

Provide a copy of OSHA standard 29CFR1910.1450 (Occupational exposure to hazardous chemicals in laboratories) to lab employees.

Chemical hygiene officer: With assistance from the safety administrator, develop, and evaluate annually, a CHP. The CHP must include:

1. Standard operating procedures for the hazardous substances used in laboratory operations
2. The methods used to control exposures to hazardous laboratory chemicals (laboratory hood, personal protective equipment, eye and body washes, etc.), and the process used to ensure that the methods are adequate
3. The procedures or processes used to ensure that exposed laboratory employees receive Right to Know training that is relevant, current and accurate
4. The circumstances under which a particular laboratory operation will require prior special permission or extraordinary precautions

5. A method or procedure to ensure that laboratory employees receive warranted medical consultation or care, because of a laboratory chemical exposure
6. The name and qualifications of the chemical hygiene officer
7. How the CHP will be made available to employees and how the annual evaluation will be documented.

Human Resources: Maintain a copy of all required employee exposure monitoring and medical evaluation records.

References:

- DHS Policy: Personal Protective Equipment
- DHS Policy: Right to Know

Cancellations:

This policy supersedes DHS Policy November 2006

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08/08