

**Part Number:** 1910

**Part Number Title:** Occupational Safety and Health Standards

**Subpart:** 1910 Subpart Z

**Subpart Title:** Toxic and Hazardous Substances

**Standard Number:** [1910.1450](#)

**Title:** Occupational exposure to hazardous chemicals in laboratories.

**Appendix:** [A](#); [B](#)

**GPO Source:** [e-CFR](#)

[1910.1450\(a\)](#)

~~6B~~

[1910.1450\(a\)\(1\)](#)

This section shall apply to all employers engaged in the laboratory use of hazardous chemicals as defined below.

[1910.1450\(a\)\(2\)](#)

Where this section applies, it shall supersede, for laboratories, the requirements of all other OSHA health standards in 29 CFR part 1910, subpart Z, except as follows:

1910.1450(a)(2)(i)

For any OSHA health standard, only the requirement to limit employee exposure to the specific permissible exposure limit shall apply for l

3)(ii)(A)

ing chemically-impregnated test media such as Dip-and-Read tests where a reagent strip is  
e specimen to be tested and the results are interpreted by comparing the color reaction to  
supplied by the manufacturer of the test strip; and

3)(ii)(B)

prepared kits such as those used in performing pregnancy tests in which all of the  
ed to conduct the test are contained in the kit.

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Definitions—

~~A~~

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~~IV~~ ~~-its~~ with adjustable sashes meet the above definition provided that the sashes are adjusted during use so that the airflow and the exhaust of air contaminants are not compromised and employees do not work inside the enclosure during the release of airborne hazardous chemicals.

~~L~~~~aboratory~~ means handling or use of such chemicals in which all of the following conditions are met:

- (i) Chemical manipulations are carried out on a "laboratory scale;"
- (ii) Multiple chemical procedures or chemicals are used;
- (iii) The procedures involved are not part of a production process, nor in any way simulate a production process; and
- (iv) "Protective laboratory practices and equipment" are available and in common use to minimize the potential for employee exposure to hazardous chemicals.

~~M~~~~edical~~ means a consultation which takes place between an employee and a licensed physician for the purpose of determining what medical examinations or procedures, if any, are appropriate in cases where a significant exposure to a hazardous chemical may have taken place.

~~M~~~~utagen~~ means chemicals that cause permanent changes in the amount or structure of the genetic

( 3 . 44 ) e ( material ) in ( cell . Chemicals classified as mutagen . 9 ( e ) 7 . 9 ( x ) ( g ) - 2 d

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The Chemical Hygiene Plan shall be readily available to employees, employee representatives and, upon request, to the Assistant Secretary.

1910.1450(e)(3)

The Chemical Hygiene Plan shall include each of the following elements and shall indicate specific measures that the employer will take to ensure laboratory employee protection;

1910.1450(e)(3)(i)

Standard operating procedures relevant to safety and health considerations to be followed when laboratory work involves the use of hazardous chemicals;

1910.1450(e)(3)(ii)

Criteria that the employer will use to determine and implement control measures to reduce employee exposure to hazardous chemicals including engineering controls, the use of personal protective equipment and hygiene practices; particular attention shall be given to the selection of control measures for chemicals that are known to be extremely hazardous;

1910.1450(e)(3)(iii)

A requirement that fume hoods and other protective equipment are functioning properly and specific measures that shall be taken to ensure proper and adequate performance of such equipment;

1910.1450(e)(3)(iv)

Provisions for employee information and training as prescribed in paragraph (f) of this section;

1910.1450(e)(3)(v)

The circumstances under which a particular laboratory operation, procedure or activity shall require prior approval from the employer or the employer's designee before implementation;

1910.1450(e)(3)(vi)

Provisions for medical consultation and medical examinations in accordance with paragraph (g) of this section;

[1910.1450\(e\)\(3\)\(vii\)](#)

Designation of personnel responsible for implementation of the Chemical Hygiene Plan including the assignment of a Chemical Hygiene Officer, and, if appropriate, establishment of a Chemical Hygiene Committee; and

[1910.1450\(e\)\(3\)\(viii\)](#)

Provisions for additional employee protection for work with particularly hazardous substances. These include "select carcinogens," reproductive toxins and substances which have a high degree of acute toxicity. Specific consideration shall be given to the following provisions which shall be included where appropriate:

1910.1450(e)(3)(viii)(A)

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The employer shall provide employees with information and training to ensure that they are apprised of the hazards of chemicals present in their work area.

1910.1450(f)(2)

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Whenever an employee develops signs or symptoms associated with a hazardous chemical to which the employee may have been exposed in the laboratory, the employee shall be provided an opportunity to receive an appropriate medical examination.

[1910.1450\(g\)\(1\)\(ii\)](#)

Where exposure monitoring reveals an exposure level routinely above the action level (or in the absence of an action level, the PEL) for an OSHA regulated substance for which there are exposure monitoring and medical surveillance requirements, medical surveillance shall be established for the affected

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[1910.1450\(h\)\(1\)\(i\)](#)

Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced.

1910.1450(h)(1)(ii)