

## Program Profile Series

Number Nine

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### LABORATORY CHEMICAL SAFETY PROGRAM

**SCOPE** - A laboratory safety program must be established if a facility has laboratory facilities using hazardous chemicals providing potential exposure to employees. Not covered are laboratory operations using commercially prepared kits (for example pregnancy tests) or "dip-and-read" testing.

**AUTHORITY/REFERENCE** - OSHA 29 CFR 1910.1450

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**ACCOUNTABILITY** - This standard shall supersede, for laboratories, all other OSHA health standards unless the particular standard has a limit for laboratory use. Any prohibition to eye and skin contact shall be observed. If the action level (or the permissible exposure limit if there is no action level) is routinely exceeded for an OSHA regulated substance monitoring and medical surveillance shall be required. The employer shall establish and maintain accurate records of measurement, employee monitoring and medical examinations and consultations.

**PROGRAM ELEMENTS** - The following six components along with the training section comprise the Hazardous Chemical Laboratory requirements:

1. Employee Monitoring - The employer shall measure employees' exposure to any substance regulated by a standard which requires monitoring if exposure levels routinely exceed the action level. Employees must be notified within 15 working days after receipt of the monitoring results.

2. Chemical Hygiene Plan - This shall be developed when hazardous chemicals are used. The plan shall include the following:

- a. Standard Operating Procedures for use of hazardous chemicals
- b. Criteria to determine and implement control measures

- Engineering controls

- Personal protective equipment

- Hygiene practices

- c. Requirement that exhaust hoods and other engineering controls are working properly and specific measures to take to ensure adequate performance including annual inspections for hoods.

- d. Employee training

- e. Laboratory operations requiring prior approval for implementation

- f. Medical surveillance

- g. Assignment of Chemical Hygiene Officer

Additional protection for specific substances

- Specific areas

- Waste disposal

- Decontamination procedures

3. Medical Surveillance - The employer shall provide medical attention:

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a. Whenever an employee develops signs/symptoms associated with a hazardous chemical to which the employee may have been exposed while in the laboratory.

b. When exposure monitoring shows levels routinely exceed the action level of regulated substances and medical surveillance is required.

c. After accidents (spills, leaks). Affected employees shall be provided the opportunity for medical consultation to determine the need for a medical examination.

d. The physician must provide the employer with a written opinion.

4. Hazard Identification - All containers must be labeled and all Material Safety Data Sheets (MSDSs) received shall be kept and be readily available.

5. Respirators - They shall be supplied, at no cost, when required. Use of any respirator shall require a respiratory protection program in accordance with OSHA 29 CFR 1910.134 as a minimum.

6. Recordkeeping - Employers shall maintain records on each employee for any exposure measurements conducted and for any medical surveillance performed.

**TRAINING** - Training is to be conducted to inform the employee of hazards of the chemicals present in the workplace. Training will be conducted upon initial assignment and when new chemicals are introduced into the laboratory.

Refresher training frequency is determined by the employer. Training shall include:

1. Contents of the OSHA laboratory standard
2. Location of the Chemical Hygiene Plan
3. Permissible Exposure Limits (PELs) of applicable chemicals
4. Health hazards of chemicals (signs and symptoms)
5. Methods used to detect the presence or accidental release of chemicals.
6. Protection procedures
  - Engineering controls
  - Personal protective equipment
  - Work practices

**DEFINITIONS**- Laboratory - Facility where laboratory use of hazardous chemicals occur.

Laboratory use - Non-production use of relatively small quantities of chemicals

Hazardous chemical - A chemical for which there is statistically significant evidence that acute or chronic health effects may occur in exposed employees.

**CROSS-REFERENCING** - Another program which may be involved in the development of this program might include Hazard Communication, Respiratory Protection, Emergency Action and First Aid Training.

**RESPONSIBILITY** - Who is going to see that the program is developed and implemented including creating and conducting the training.