

Lesson Plan

Course Title: Hazardous Chemicals in Laboratory Safety
Time: Approximately 45 minutes
Objective: To inform employees of the requirements under OSHA Standard CFR 1910.1450, Hazardous Chemicals in Laboratory Standard.

Teaching Aids Required:

- Overhead Projector
- Pointer
- Copies for each student of at least three different Material Safety Data Sheets which are of relevance in their work area.
- Several chemical containers with proper labeling on them.
- Examples of improper labeling.
- Copy of Company Written Chemical Hygiene Plan
- Various respiratory protection

Slide #	Information	Time Per Area
1	Hazardous Chemicals in Laboratory Safety	1:00
2	Introduction to OSHA Standard CFR 1910.1450 Who does OSHA Standard CFR 1910.1450 "Chemical Laboratory Safety" apply to? Why is it important My Background	5:00
3	OSHA Standard CFR 1910.1450 What are the Hazardous Chemicals in Laboratory Standard requirements? What should employees be informed of ? What does employee training include?	5:00
4	OSHA Standard CFR 1910.1450 Initial and ongoing employee exposure monitoring Employee notification of monitoring results Employer development of a Chemical Hygiene Plan	5:00
5	OSHA Standard CFR 1910.1450 Medical consultation and examinations Hazard Identification Respiratory equipment	5:00
6	Employee Information Hazardous chemicals in your work area Operations in your work area involving hazardous chemicals Location and availability of the written chemical hygiene plan, MSDS, and reference materials on safe handling and storage of chemicals	5:00
7	Employee Training How to recognize the hazardous chemicals in their work place. Methods and observations used to detect the presence or release of a hazardous chemical in the work area.	5:00

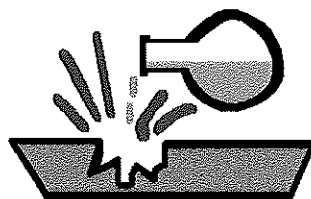
8	The physical and health hazards of chemicals used Employee Training	5:00
9	The measures employees can take to protect themselves Discussion Please share experiences you have had in this area. Give two examples of where you witnessed actions that put employees at risk. Why is this more than just another Government rule? Who is responsible for a safe working environment?	5:00
10	Play videotape "Chemical Safety"	7:00

Hazardous Chemicals in Laboratory Safety



Introduction to OSHA Standard CFR 1910.1450

- Who does OSHA Standard CFR 1910.1450 “Chemical Laboratory Safety” apply to?
- Why is it important
- My Background



Who does OSHA Standard CFR 1910.1450 “Chemical Laboratory Safety” apply to?

-All employers and employees engaged in laboratory use of hazardous chemicals.

Why is it important

-It is important for the health and safety of all employees

-It is important for handling of chemicals

-Vital for proper use and disposal of chemicals

My Background

-How long I have worked here

-My role and responsibilities

-How this standard impacts my job

-Personal reasons why this is important

OSHA Standard CFR 1910.1450

- What are the Hazardous Chemicals in Laboratory Standard requirements?
- What should employees be informed of ?
- What does employee training include?



What are the Hazardous Chemicals in Laboratory Standard requirements?

-The requirements cover the areas of:

- Initial and ongoing employee exposure monitoring
- Employee notification of monitoring results
- Employer development of a Chemical Hygiene Plan
- Medical consultation and examinations
- Hazard Identification
- Respiratory equipment
- Employee Information

What should employees be informed of?

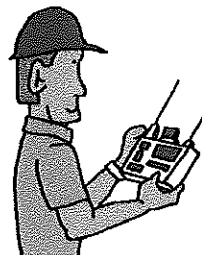
- Hazardous chemicals in their work area
- Operations in their work area involving hazardous chemicals
- Location and availability of the written chemical hygiene plan, MSDS, and reference materials on safe handling and storage of chemicals
- OSHA Standard 1910.1450
- Permissible exposure limits for chemicals
- Signs and symptoms of exposure to chemicals

What does employee training include?

- * how to recognize the hazardous chemicals in their work place.
- * methods and observations used to detect the presence or release of a hazardous chemical in the work area.
- *the physical and health hazards of chemicals used
- *the measures employees can take to protect themselves
- *the applicable details of the written chemical hygiene plan

OSHA Standard CFR 1910.1450

- Initial and ongoing employee exposure monitoring
- Employee notification of monitoring results
- Employer development of a Chemical Hygiene Plan



Initial and ongoing employee exposure monitoring

- Employees work areas are monitored for hazardous chemicals before employees are allowed to work in that area
- If there is a reading that is close to the action level, ongoing monitoring will be conducted

Employee notification of monitoring results

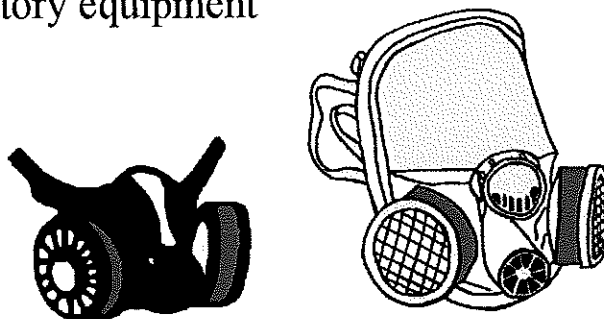
- All results from monitoring will be reported to the employees

Employer development of a Chemical Hygiene Plan

- A plan that is capable of protecting employees from the health hazards associated with the hazardous chemicals used
- The plan shall be available to employees upon request

OSHA Standard CFR 1910.1450

- Medical consultation and examinations
- Hazard Identification
- Respiratory equipment



Medical consultation and examinations

-Will be offered any time that there is a possibility that exposure to a hazardous chemical has occurred. This can be determined by monitoring or by determining employee physical proximity to a spill or leak

Hazard Identification

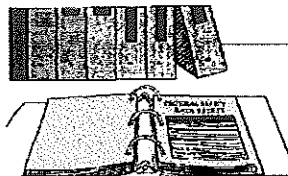
- Labels must remain intact
- Material Safety Data Sheets must remain on file

Respiratory equipment

-If the use of respiratory protection is needed your employer will provide you with the appropriate respiratory protection

Employee Information

- Hazardous chemicals in your work area
- Operations in your work area involving hazardous chemicals
- Location and availability of the written chemical hygiene plan, MSDS, and reference materials on safe handling and storage of chemicals



Hazardous chemicals in your work area

- review applicable MSDS sheets regarding the hazards of these chemicals
- discuss Permissible exposure limits
- discuss signs and symptoms of exposure to hazardous chemicals

Operations in your work area involving hazardous chemicals

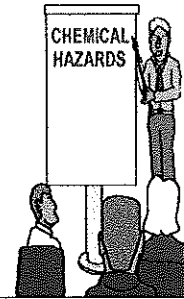
- describe to employees what operations make use of hazardous chemicals and how they are used

Location and availability of the written chemical hygiene plan, MSDS, and reference materials on safe handling and storage of chemicals

- inform employees on where to find these documents and how to obtain them

Employee Training

- How to recognize the hazardous chemicals in their work place.
- Methods and observations used to detect the presence or release of a hazardous chemical in the work area.
- The physical and health hazards of chemicals used



How to recognize the hazardous chemicals in their work place.

-Please refer to the Material Safety Data Sheets for information regarding appropriate warning signs of chemicals used on site.

Methods and observations used to detect the presence or release of a hazardous chemical in the work area.

-Explain all warning strobes, bells, horns or other engineering measures taken to inform employees of a leak or spill.

-Please refer to the Material Safety Data Sheets for information regarding appropriate warning properties of chemicals used on site.

The physical and health hazards of the chemicals used

- Please refer to the Material Safety Data Sheets for information regarding health hazards of chemicals used on site.

Employee Training

- The measures employees can take to protect themselves



The measures employees can take to protect themselves

Discuss:

- appropriate work practices
- emergency procedures
- personal protective equipment

Discussion

- Please share experiences you have had in this area.
- Give two examples of where you witnessed actions that put employees at risk.
- Why is this more than just another Government rule?
- Who is responsible for a safe working environment?



Please share experiences you have had in this area.

- close calls
- mishaps at other facilities
- news reports

Give two examples of where you witnessed actions that put employees at risk.

- not labeling containers
- misuse of chemicals
- no Material Safety Data Sheets available

Why is this more than just another Government rule?

- what makes this important
- what can happen if disregarded
- why is it just good business sense

Who is responsible for a safe working environment?

- each person at this facility
- we are all responsible