

4.0 INFORMATION AND TRAINING

The OSHA Lab Standard requires that individuals who will be working with chemicals in the laboratory be provided with sufficient training to enable them to conduct their work safely. Training must be provided prior to the time when individuals begin their duties involving chemicals and whenever there is a significant change in the types or quantities of chemicals used. Departments and, ultimately, principal investigators (or laboratory supervisors) are responsible for ensuring that all individuals working in their laboratories have been adequately trained.

4.1 Required Training Content

The general training topics required by the Lab Standard are the:

- Content of the Lab Standard.
- Location and availability of the *Laboratory Chemical Safety Plan* (i.e., Chemical Hygiene Plan).
- Permissible exposure limits (PELs) for OSHA regulated substances (see Appendix A) or recommended limits for other materials that have no OSHA limits.
- Signs and symptoms associated with chemical exposure.
- Location and availability of known reference material on the hazards, safe handling, storage, and disposal of chemicals. This includes, but is not limited to, Material Safety Data Sheets (MSDSs).
- Methods to detect the presence or release of chemicals.
- Physical and health hazards of chemicals.
- Measures that laboratory workers can take to protect themselves from chemical hazards, including control measures, personal protective equipment, SOPs, and emergency procedures.

Training Resources

The University Office of Environmental Health and Safety Management (EH&S) provides *Laboratory Safety and Chemical Hygiene* training to the university community. This comprehensive training is designed to cover the topics required by the OSHA Lab Standard and more. This training, however, is not intended to be the sole means of training laboratory workers, but must be supplemented by additional safety instruction from the principal investigator (or laboratory supervisor) on the potential hazards associated with an individual's specific duties. This individualized training should include a review of the laboratory's safety features and equipment (Form LCS-2 in Appendix B has been prepared to assist principal investigators in this process). For information on other safety training resources available from EH&S (such as specialized training sessions, videotapes, safety guides, chemical references, and MSDS's), individuals should call 855-6311. Below is a partial list of such resources:

Videotapes

The Keys to Laboratory Safety
(Industrial Training, Inc.)

Elements of Safety

12 tapes (J.T. Baker)

- *Orientation to Lab Safety*
- *Safety Showers and Eyewashes*
- *Flammables and Explosives*
- *The OSHA Formaldehyde Standard*
- *Electrical Safety in the Laboratory*
- *Laboratory Ergonomics*
- *Material Safety Data Sheets*
- *Laboratory Hoods*
- *Preventing Contamination*
- *Safe Handling of Laboratory Glassware*
- *Planning for Laboratory Emergencies*
- *Handling Compressed Gas Cylinders*

Practicing Safe Science
(Howard Hughes Medical Institute)

Safety in the Research Laboratory,

7 tapes (Howard Hughes Medical Inst.)

- *Assessing Risks*
- *Centrifugation Hazards*
- *Chemical Hazards*
- *Chemical Storage Hazards*
- *Emergency Response*
- *Glassware Washing Hazards*
- *Radionuclide Hazards*

Special Handling - Particularly

Hazardous Substances in the Laboratory
3 tapes (Target Training Technologies)

- *General Principals*
- *Control and Protection*
- *Spills and Disposal*

Indiana University Laboratory Safety Guides

Office of Environmental Health and
Safety Management:
Laboratory Chemical Safety Plan
Chemical Spill Response Guide
Hazardous Waste Management Guide

Office of the Vice Provost for Research:
Radiation Safety Manual for Radioactive
Material Users
Radiation Safety Guide for Users of
Analytical X-Ray Systems
Laser Safety Guide
Radionuclide Fact Sheets

4.3 Training Documentation

Departments and principal investigators are responsible for documenting the safety training provided to individuals working within their laboratories. For each individual, a record should be maintained not only for formal training sessions attended such as the EH&S *Laboratory Safety Orientation*, but also for informal safety instruction or training provided in the laboratory (Form LCS-3 in Appendix B may be used for this purpose).