

Standard Operating Procedure FAQ's

What is a Chemical Hygiene Plan and Standard Operating Procedures?

OSHA recognized the need for a regulation that focused on the unique nature of laboratory work; thus, the Laboratory Standard (29CFR1910.1450) was developed. This performance oriented rule is intended to provide laboratories with the flexibility of implementing safe work practices and procedures specific to their workplace while at the same time reaching the important goal of reducing workplace accidents and injuries. The written Chemical Hygiene Plan is the core of the laboratory safety standard and affords flexibility in providing the type of worker protection appropriate for a specific workplace.

According to the Lab Standard, the Chemical Hygiene Plan must be capable of protecting employees from health hazards associated with work conducted in that laboratory. The Standard Operating Procedure (SOP) is the mechanism by which safety and health considerations are conveyed to the laboratory worker. Standard Operating Procedures, developed by the principal investigator, should establish appropriate work practices, methods of control, measures for the use and maintenance of personal protective equipment, and special precautions for work with particularly hazardous substances or processes.

How do I prepare a Standard Operating Procedure?

The first step to completing a Standard Operating Procedure is to **IDENTIFY** the particularly hazardous chemicals and procedures in your laboratory. A chemical is considered particularly hazardous if it is an allergen, acutely toxic, a reproductive toxin, a carcinogen, a regulated chemical, or is physically hazardous (e.g. extremely flammable, highly reactive, cryogenics). Identify hazardous operations being conducted in your lab: for instance, use of centrifuges, use of compressed gas cylinders, equipment that employs the use of flammable liquids, or pressurized systems.

The second step to completing a SOP is the **EVALUATE** the hazard. Consult MSDSs to determine the hazards of the chemicals you will be working with. Contact the Chemical Hygiene Officer for assistance. Ask yourself questions. What are the conditions of use? What quantity of material will be used? Is exposure above an OSHA PEL possible? Is the material a health, contact, or fire hazard? How much and what type of waste will this produce?

The third step to completing a SOP is to establish appropriate **CONTROL** methods. Appropriate control methods include: specifying the use of engineering controls such as fume hoods and gloves boxes to prevent exposures, implementing "designated use areas" for particularly hazardous chemicals, specify personal protective equipment requirements, encourage sound work practices by developing housekeeping policies, inspection policies, and laboratory rules and expectations.

What do I do with completed Standard Operating Procedure?

Ensure that lab personnel are trained, understand, and implement the procedures as directed in the SOP. Incorporate newly developed SOPs into your laboratory Chemical Hygiene Plan. You should forward copies of your completed SOPs to the Chemical Hygiene Officer. Remember, your CHP needs to be reviewed at least annually. This review must be documented.