Guidelines for Preparing SOPs

A Standard Operating Procedure (SOP) is a set of written procedures explaining how to safely work with hazardous chemicals or safely complete a hazardous process.

Different methods can be used to write an SOP:

SOPs may be written according to:

The **Hazardous Chemical:** ethidium bromide, acrylamide, methylene chloride, formaldehyde
The **Process Involved:** distillation, extraction, column chromatography,
The **Hazardous Chemical Class:** flammable liquids, corrosive materials, cryogenic materials

Each SOP should contain the following information:

Contact Information: PI name, location of use/process (building and room #), and contact information.

Process Information: Describe the process that is being conducted. For a hazardous chemical, name the hazardous chemical that the SOP is being developed for. For a process, describe the process, list all chemicals that will be used in the process. For a hazardous chemical class, describe the hazards associated with a particular group of chemicals and list the chemicals being used in the laboratory.

Describe the Potential Hazards of the Process or Chemical: Include physical and health hazards such as, fire, explosion, burns to skin, toxic fume generation, and suspected carcinogen. Include information about acute health effects and chronic health effects.

Personal Protective Equipment (PPE): Identify the required level of personal protective equipment and hygiene practices needed for each hazardous chemical, process, or hazard class. Eye protection must be made available to all employees and visitors to the lab. Skin and body protection involves the use of PPE to protect against chemical exposure. Personal protective equipment includes, but is not limit to: gloves, aprons, lab coats, safety glasses, chemical splash goggles, and face shields.

Engineering Controls: Describe the engineering controls that will be used to prevent or reduce employee exposure to hazardous chemicals. This includes ventilation devices such as fume hoods, glove boxes, biosafety cabinets, and etc.

Special Handling Procedures and Storage Requirements: List storage requirements for the hazardous chemicals involved in the SOP, including specific storage areas, storage according to compatibility and policies regarding access to chemicals. Special procedures such as dating peroxide forming chemicals upon receipt and opening and testing for peroxide formation after the appropriate date.

Spill and Accident Procedures: Indicate how spills or accidental releases will be handled and by whom. List the location of appropriate emergency equipment such as spill kits, eye wash and drench shower locations, and fire extinguishers. Identify the location of emergency response phone numbers.

Waste Disposal Procedures: All hazardous waste must be containerized and disposed of through the EH&S office.

MSDS location: Lab personnel must have access to the MSDS for each chemical used in the laboratory. Also, indicate the location of other pertinent safety information such as equipment manuals and chemical references.