

Creating Standard Operating Procedures

Summary: Standard Operating Procedure

A standard operating procedure (SOP) is a set of written instructions that describes in detail how to perform a laboratory process or experiment safely and effectively. SOPs are a requirement of Stanford University's Chemical Hygiene Plan <http://chemhygienepan.stanford.edu>, as described in section 4.0. **The scope of an SOP can cover:**

- The specific use of a chemical or class of chemicals (such as a specific laboratory procedure).
- The generic use specific chemical or class of chemicals with similar hazards (for example, mineral acids).
- A generic procedure (such as distillation) that covers several chemicals.

Responsibility

The PI/Lab Supervisor is responsible for providing written Standard Operating Procedures (SOPs) relevant to health and safety for laboratory activities he/she directs involving hazardous chemicals. Laboratory personnel working autonomously or performing independent research are responsible for developing SOPs appropriate for their own work using the guidance below.

Prioritizing SOP Development

Priority for SOP development should be given to any operation involving Restricted Chemicals, certain higher risk chemicals, such as Particularly Hazardous Substances and highly reactive chemicals, and specified higher risk research procedures described in the CHP.

| What to do? | How to do this? |
|--------------------------------|---|
| 1. Prioritize SOPs to generate | Consult with PI/Laboratory Supervisor on above guidance. |
| 2. Create SOPs | <p>Use one of the following SU SOP Templates, or equivalent:</p> <ul style="list-style-type: none"> • SU SOP Template • SU SOP Template for Alkali Metals • SU SOP Template for Toxic Gases • SU SOP Template for Nanomaterials <p>If using an SU SOP Template:</p> <ol style="list-style-type: none"> 1. Complete the required sections. <ol style="list-style-type: none"> 1. Text on how to complete the section is provided. Guidance text may be deleted. 2. Some sections indicate blanks to complete. 3. The section on Emergency Procedures, provides the established Stanford University procedures to follow, with specific contact information to be added. 2. After completion, review the SOP with your Principal Investigator/Lab Supervisor. [NOTE: At any time, you are welcome to consult with EH&S (723-0448) during the development of your SOP.] <p>General Use SOPs General use SOPs for the major classes of hazardous chemicals are available for you to incorporate into your own SOPs, as appropriate.</p> <ul style="list-style-type: none"> • Carcinogens • Compressed Gases • Corrosive Materials • Cryogenic Liquids • Flammable & Combustible Liquids • Highly Acutely Toxic Materials • Highly Reactive/Unstable Materials • Irritants • Reproductive Toxins • Sensitizers |
| 3. Maintain SOPs | Maintain copy that is physically or electronically accessible to all lab members. |
| 4. Revise SOPs | Consult with PI/Laboratory Supervisor on SOP on timeframe for re-evaluating and revising SOP to ensure it reflects current best practices. |