

# STANDARD OPERATING PROCEDURES VS. SAFETY DATA SHEETS

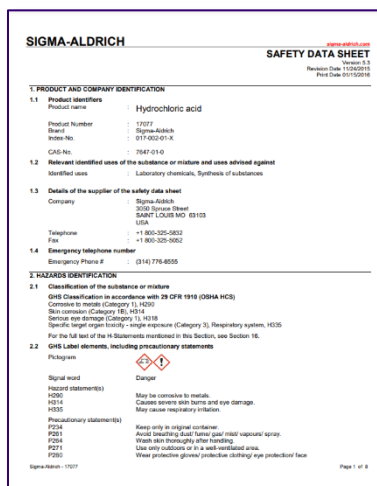


Safety data sheets (SDSs) and standard operating procedures (SOPs) are both required elements of a laboratory's chemical hygiene plan but each captures different types of information.

## SAFETY DATA SHEETS (SDSs)

An **SDS describes the physical and health hazards of a chemical** (or chemical-containing product) and can be a good source of information for assessing risks associated with the storage, use, and transport of a chemical.

### Where can I find an SDS?



EH&S maintains a centralized **library of SDSs** in the online [MyChem database](#) for your use, and SDSs are added to the library as employees inventory their chemicals in MyChem. **All chemicals listed in your MyChem inventory must have an SDS** in MyChem.

Information listed on Caution Signs printed from MyChem will *not* be accurate if an SDS is missing.

The **SDS is created by the manufacturer or vendor** of the chemical and the standard format includes the following sections:

- Section 1: Identification
- Section 2: Hazard(s) identification
- Section 3: Composition/information on ingredients
- Section 4: First-aid measures
- Section 5: Fire-fighting measures
- Section 6: Accidental release measures
- Section 7: Handling and storage
- Section 8: Exposure controls/personal protection
- Section 9: Physical and chemical properties

- Section 10: Stability and reactivity reactions
- Section 11: Toxicological information
- Section 12-16: Additional/Other information

### Who must be able to access SDSs?

[Washington state and federal workplace safety regulations](#) require that SDSs must be **readily accessible to all personnel during all work shifts** when these products are present in the work environment.

State and federal rules also require SDSs to be **available to local fire departments** and local and state emergency planning officials. These officials have access to MyChem.

EH&S recommends laboratories maintain paper copies or easily be able to print SDSs for hazardous chemicals likely to spill and/or cause injury. Having an SDS immediately available when someone is exposed to a hazardous chemical **aids emergency personnel in how to respond** and treat that person.

### How do I use the SDS information?

Use the information found in an SDS for **writing a new chemical SOP**, but keep in mind that information provided in an SDS is usually relevant for the use of large quantities of the chemical. Information provided in an SDS can vary and in some cases is inadequate to identify all hazards and risks, so it can be helpful to also refer to SDSs for the same chemical from different manufacturers.

## SAFETY DATA SHEETS (SDSs)

- > Provide general hazard information
- > Content quality and detail can vary by manufacturer
- > Provide information for writing SOPs

## What about synthesized chemicals?

If a new chemical is synthesized by a lab or during an experiment, an SDS may not be available for it. Use this [SDS template](#) to make a GHS-compliant SDS.

Please refer to [Section 2 of the UW Laboratory Safety Manual](#) for more information about SDSs.

## STANDARD OPERATING PROCEDURES (SOPs)

An SOP provides researchers with detailed lab-specific information for the handling of a chemical at every stage of its presence in the laboratory.

SOPs are [required by the Washington Administrative Code](#) to be

developed and maintained by individual laboratories, and should be written by laboratory personnel who are most knowledgeable and involved with the experimental process. This applies to all hazardous materials (including all hazardous chemicals) in use.

### What are SOPs for?

SOPs are **specific, detailed instructions** that describe the safety measures required for a process, chemical or chemical class used in the lab. SOPs include information about potential hazards, consequences and the necessary controls to manage the potential risks; they list information and actions required of the lab personnel (specific to the lab) to prevent an exposure or accident.

### Option 1: Use an SOP template.

To assist you in writing SOPs, EH&S provides a [blank SOP template](#) and [example SOPs](#) on the [Chemical SOPs webpage](#) to use and modify with your specific location, procedures, and practices. When using SOP templates:

1. List the chemicals in your inventory covered by the SOP;
2. List specific personal protective equipment (PPE) used; and
3. Identify where the chemical is handled and stored within the lab.

Remove template instructions and guidance that do *not* apply to your practices before finalizing the SOP for use.

### Option 2: Use an existing SOP.

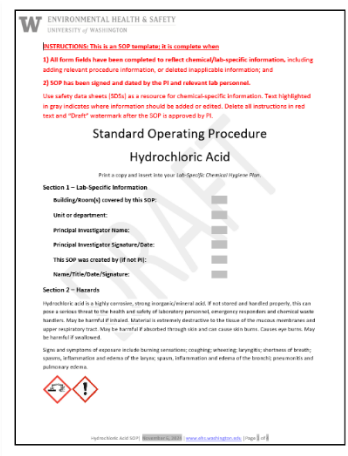
SOPs obtained from other organizations and SOPs written in the form of step-by-step procedures can be used if all the basic components are addressed, information is edited to be UW- and location-specific, and the SOP accurately describes your laboratory's safety requirements.

### Option 3: Create your own SOP.

Labs can also use the [SOP Required Elements Checklist](#) to write their own.

SOPs must contain, at a minimum, the following:

- Description of the chemical(s) and/or laboratory procedure that will be performed
- Known hazards and potential routes of exposure
- Specific personal protective equipment (PPE) required
- Environmental/ventilation controls
- Special handling procedures and specific storage requirements
- Location of use in the lab
- Spill and accident procedure details
- Decontamination procedures
- Waste disposal procedures and locations
- Special precautions for animal use (if applicable)
- Required approvals



## STANDARD OPERATING PROCEDURES (SOPs)

- > Are written by laboratory personnel
- > Provide detailed information about a procedure, chemical or chemical class used in the lab
- > Can be used as training documentation

All laboratory personnel must be trained by the RP, laboratory manager, CHO, or supervisor prior to using the process/chemical in the laboratory. Documentation of training must be maintained, and SOPs can be used for training documentation.

Please refer to [Section 6 of the UW Laboratory Safety Manual](#) for more information about SOPs.

**Contact EH&S Lab Safety at 206.685.3993 or [labcheck@uw.edu](mailto:labcheck@uw.edu) for more information.**