

Restricted Substances and Approval Process

SCU has developed a list of Restricted Substances that must be evaluated and formally approved prior to purchase and use. Restricted substances include chemicals that:

- (a) Are highly hazardous, or have unique hazards requiring special procedures or equipment for containment, storage, safe use, emergency, and/or waste management,
- (b) Could have wide impact to surrounding personnel, environment, and/or facilities infrastructure, if out of containment, or
- (c) Have specific control, reporting, or permitting requirements for their use, per federal and local regulations

List of Restricted Substances:

Prior approval is required for work with the substances listed below:

- Any of the [13 "listed" carcinogens](#) that requires reporting to Cal/OSHA
- Certain uses of ["regulated" carcinogens](#) that may require reporting to Cal/OSHA
- Toxic gases regulated by Santa Clara County (Link to relevant code: [Toxic Gas Ordinance](#))
- DEA Controlled Substances (Link to DEA website: [Drug Scheduling and List](#))
- Pyrophorics
- Highly Reactive, Water Reactive, or unstable materials, e.g. chemicals with an NFPA reactivity hazard of 3 or more
- Explosives, or materials that can easily decompose to explosive substances
- Cryogenic liquids, with the exception of small amounts of liquid nitrogen, argon, or helium (i.e. not exceeding common handheld dewars)
- Acutely toxic substances and gases, e.g. chemicals with an NFPA health hazard of 4
- Select Agents and Toxins (Link: [List from CDC](#))
- High potency active pharmaceutical ingredients, with occupational exposure limit (OEL) of $\leq 100 \mu\text{g}/\text{m}^3$
- Chemicals requiring special procedures or equipment for safe use, e.g. hydrofluoric acid, picric acid, concentrated (>70%) or hot perchloric acid
- Highly flammable gases, e.g. hydrogen, propane, if the use exceeds the size of a lecture bottle or similar
- Chemicals requiring a Workplace Chemical Protection Plan (WCPP) per EPA under Section 6 of the Toxic Substances Controls Act (TSCA) - see Appendix 10 of SCU Chemical Hygiene Plan: WCPP for laboratory use of dichloromethane (also known as methylene chloride)

Additional Restricted Substances beyond the list above may be identified by the Chemical Hygiene Officer (CHO).

Restricted Substances Approval Process

The laboratory supervisor is responsible to ensure that a Restricted Substances determination is made on existing chemical inventory and any future purchases for their laboratory. Contact the CHO for guidance if unsure whether a chemical is considered a Restricted Substance.

The laboratory supervisor must contact the CHO to request a formal review *prior* to purchasing a Restricted Substance. A hazard and risk assessment for the specific Restricted Substance must be conducted with the laboratory supervisor, laboratory operations director, and the CHO. Depending on the substance, additional input may be required by others, (e.g. Facilities, EHS).

The Restricted Substances request may be approved by the CHO once the following requirements have been met:

1. All appropriate equipment or facility infrastructure for safe containment and use are in place and operational
2. Completion of any permitting, registration, reporting, or exposure monitoring per regulatory requirements
3. A written laboratory-specific Standard Operating Procedure (SOP) for use of the Restricted Substance (see Appendix 6 of SCU Chemical Hygiene Plan for template). CHO review of the SOP is required.
4. Any additional necessary protocols to meet internal SCU or external regulatory requirements. These could include establishing:
 - Designated work area(s) and containment devices
 - Access controls
 - Warning signage
 - Decontamination procedure and waste management
 - Required recordkeeping (e.g. training and approved users, usage logs)
 - Exposure monitoring methods
 - Special first aid, spill or leak clean up procedures