UNIVERSITY OF SOUTH DAKOTA

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Laboratory Chemical Safety

Policy Contents

I. REASON FOR THIS POLICY

The University of South Dakota strives to maintain a safe living, learning, and working environment and is an expectation of the University, its faculty and staff. The hazards posed by the variety of chemicals and chemical products as well as their waste products dictates the necessity for the development of and adherence to rigorous protocols, laboratories and workplace best practices, and regulations concerning chemicals and hazardous materials.

II. STATEMENT OF POLICY

The intent of this policy is to establish required safe practices for faculty, staff, and University campus members, increase safety awareness on campus, and reduce institutional liability. This policy shall provide the basis for controlling exposure to hazardous chemical agents and minimizing the risk of injury to university faculty, staff, and campus members at the highest level reasonably possible.

III. DEFINITIONS

AGENT – Something that produces or can produce a chemical, physical, or biological effect on the environment or organisms within an environment.

HAZARDOUS – capable of producing adverse effects on humans or the environment

HAZARDOUS CHEMICAL – An element, compound, or mixture that poses a potential health hazard to humans or threatens the integrity of materials, facilities, or the environment

IV. PROCEDURES

GENERAL

Children under the age of 18 are prohibited from areas where hazardous materials are used and/or stored unless prior approval has been obtained from the department head and EHS. Children must be always supervised by the laboratory supervisor or PI.

Individuals shall follow basic precautions when working with or around chemical hazardous material. Good work/laboratory practices and guidelines discussed in the USD Biological & Chemical Safety Manual shall be followed when working with or around chemical hazardous.

TRAINING

Individuals working with or around hazardous chemicals shall be aware of the hazards of all compounds/equipment you work with. Assess the risks before using any chemical. Department supervisors should post the proper procedures for handling hazardous material and the procedures to follow in the event of a spill or other emergency.

Department Supervisors and Principal Investigators have the sole responsibility of providing notice of use of hazardous chemical materials, controlling access to hazardous materials in their possession, training personnel who will be working with or in areas where chemical hazardous materials are used or stored, provide engineering controls and personnel protective equipment to protect individuals from reasonably potential hazards.

All personnel within a laboratory should be familiar with the location of all relevant safety equipment outlined below. Each laboratory should include signage located near each egress door listing the location of each of safety equipment.

It is the responsibility of the individual to notify supervisors of unsafe applications of procedures, damaged equipment, and hazardous tasks or materials for which reasonable training or protection has not been provided.

PERSONAL PROTECTIVE EQUIPMENT

Supervisors and Principal Investigators have the sole responsibility of providing engineering controls and personnel protective equipment to protect individuals working with or around hazardous substances from reasonably potential hazards.

All work with corrosive, flammable, odoriferous, toxic or other dangerous materials shall be conducted only in a properly operating chemical fume hood rated for that material.

Equipment and processes that have the potential to generate an aerosol of liquid or solid particles containing hazardous materials shall be operated inside an appropriate fume hood or biosafety cabinet. Alternatively, when a fume hood or biosafety cabinet is not available for the activity or operation appropriate PPE must be utilized by the operator(s) and individuals occupying the area of the activity or operation to protect against ingestion, inhalation, or contact with skin and eyes.

CHEMICAL SEGREGATION

Acids shall be stored in a dedicated acid cabinet. Nitric acid should be stored alone unless the cabinet provides a separate compartment for nitric acid storage.

Highly toxic chemicals shall be stored in a dedicated, lockable poison cabinet that has been labeled with a highly visible sign.

Volatile and odoriferous chemicals shall be stored in a ventilated cabinet. Flammables shall be stored in an approved flammable liquid storage cabinet.

Water sensitive chemicals must be stored in a water-tight cabinet in a cool and dry location separate from all other chemicals and/or aqueous solutions in the work area.

V. RELATED DOCUMENTS, FORMS AND TOOLS

Article - Chemical Safety Manual

USD Chemical Safety Manual