

University of Alaska Anchorage	Section EHS/RMS
ADMINISTRATIVE SERVICES MANUAL	Part Procedure
Policies and Procedures	Statement 3
Title <i>LABORATORY SAFETY MANAGEMENT</i>	Effective Date 03/01/10

*General
Laboratory
Safety*

One of the most serious problems in laboratory safety is the lack of information about hazards and causes of accidents in laboratories. Laboratory workers are exposed to an impressive list of potential hazards: broken glass, high voltage electronic gadgetry, pathogenic organisms, uncooperative research animals, radiation, and an endless variety of substances that are flammable, explosive, corrosive, and carcinogenic.

Safety is an intrinsic part of each laboratory operation and work should be planned to reduce exposure to hazards. Following established safety procedures will reduce the likelihood of injury. Recommended practices and procedures include the following:

1. Do not smoke, eat or drink, or prepare or store food or drink in the laboratory. Do not store food in the laboratory refrigerators. Do not use laboratory equipment to prepare or consume food and beverages.
2. Maintain good housekeeping habits. Do not clutter aisles with chairs, stools, boxes, etc.
3. Learn about the location and use of fire extinguishers, fire blanket, water hose, fire alarms, safety showers, and eyebaths. Maintain emergency equipment.
4. Use eyebaths in all laboratories where any chemicals are used. **Use goggles or safety glasses at all times.**
5. Do not inhale toxic vapor and gases. Use fume hoods when appropriate.
6. Do not store materials in fume hoods. Keep hood clear and clean.
7. Set up experiments so it is not necessary to reach through the assembly to turn water, gas or electricity on or off.

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8. Guard against casual handling of glassware. To safely cut glass tubing scratch it with a triangular file or glass knife. Wrap a towel around the tubing or wear heavy gloves. **Wear eye protection.** Place thumbnails against tubing directly opposite scratch and press while pulling hands apart. Always fire polish tubing with an outside diameter of a centimeter or more. Use a cutting wheel or hot wire cutter.
9. When picking up broken glassware, use a brush and dustpan. Pick up pieces using fine wet cotton held with tongs. Discard all shipped and broken glassware into a separate specially marked container (wear eye protection).
10. Learn the regulations for proper labeling of containers with contents, concentration, manufacturer, handling precautions, and date (in case of unstable compounds).
11. Remember that acids are poured into water not vice versa.
12. Mercury spills can best be cleared up by use of a suction tube and collected in a vacuum trap.

The foregoing guidelines for laboratory safety are only general in nature. Individual department laboratory safety procedures should be developed to address the specific and unique circumstances of each laboratory environment.

Biohazard Safety

The following clinical and emergency precautions should be followed:

1. University facilities using biologically hazardous materials in research or other operations must follow safety procedures outline in the lab safety manual developed and implemented by by each department. Lab safety manuals will be approved by EHS/RMS.

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2. Clinicians, emergency responders, and other medical personnel must take all appropriate precautions for dealing with and preventing exposure to the body fluids and other medical contaminants, and strictly enforce disinfection and disposal procedures.

Laboratory Ventilation

Laboratory ventilation program is monitored by EHS/RMS and Facilities Maintenance Services to ensure a safe and healthy environment for students, faculty, employees, and visitors. The program includes technical standards for design and operation and regularly scheduled inspections. The requirements apply to all fume hoods and other ventilation systems used for emission control and operator/visitor protection.

Use of exhaust fume hoods is the preferred control method for operations involving radioactive materials and chemicals that can become airborne. Department heads and principal investigators should ensure the responsible use of ventilation equipment and immediately report all malfunctions to EHS/RMS (786-1351 or ayssg@uaa.alaska.edu) or Facilities Maintenance Services (786-6980).

Refer to EHS/RMS [*Policy 3, LABORATORY SAFETY STANDARDS*](#) for additional information. UAA's [Chemical Hygiene Plan](#) is now available and can be modified for the specific needs of each lab.