

CHEMICAL HYGIENE PLAN
Western Kentucky University
Department of Chemistry

2012

The Chemical Hygiene plan (CHP) is designed to cover the operation of laboratories operated by Western Kentucky University. The CHP is in the departmental office, stockrooms and laboratories. The department conducts a safety seminar every semester. All research students and teaching assistants must attend every semester. Faculty must attend annually. Every one is expected to show personal responsibility for maintaining professional safety standards. Failure to comply with the safety standards of the department may result in disciplinary action up to and including dismissal. All Chemistry teaching, research and stock room facilities are covered including affiliated research center laboratories.

Procedures for Laboratory Chemicals

Chemicals must be purchased by the Department of Chemistry, received and inventoried by the Department Stockroom according to the Department procedures, prior to being moved to the designated usage location. Chemical containers (shipped to the department) shall not be accepted without packaging in accord with all appropriate regulations, appropriate labeling, and accompanying material safety data sheets (or their electronic equivalents). All chemical shipments should be dated when received and opened. Storage of chemicals at the lab bench or other work areas shall be limited to those amounts necessary for one operation or task. Periodic inventories of chemicals in laboratories will be conducted. General precautions should be followed for the handling and use of all chemicals: minimal or no contact (with chemicals?); wash hands/exposed skin when leaving the laboratory; no mouth pipetting, eating or drinking. Laboratory refrigerators must be used only for chemicals, as rated. Each employee shall keep the work area clean and uncluttered. All chemicals and equipments shall be properly labeled. All broken glassware must be immediately disposed of in the broken glass container. Waste receptacles, labeled for the intended waste, must be labeled, placed and maintained in the hood, with an appropriate secondary spill container.

Personal Protective Equipment

Whenever chemicals are in use in a laboratory or a prep room, safety goggles meeting ANSI Z87.1 are required. The use of contact lenses is prohibited. Sandals, shoes that have open toes and/or open heels and canvas shoes may not be worn in the laboratories. No one without appropriate footwear is allowed to work in the laboratories. Shorts may not be worn in chemical laboratories.

Appropriate chemical-resistant gloves should be worn at all times when there may be skin contact with chemicals

Teaching Assistants must ensure that all students who work in their area know and follow the rules and procedures established. Long hair and loose-fitting clothing shall be confined close to the body to avoid being caught on fire or caught in moving machine/equipment parts. Volatile chemicals shall only be handled in chemical fume hoods. Professional behavior is expected at all times while working in the laboratories.

Labeling

All containers in the laboratory shall be labeled. This includes chemical containers and waste containers. The label shall be informative, durable, and will identify contents, date of acquisition and location.

Housekeeping

Each laboratory worker is directly responsible for the cleanliness of his or her workspace, and jointly responsible for common areas of the laboratory. Teaching Assistants shall insist on the maintenance of housekeeping standards. All spills on lab benches or floors shall be immediately cleaned and properly disposed of. For large spills, contact the Department office or Environmental Health and Safety. The lab benches shall be kept clear of equipment and chemicals except those necessary for the work currently being performed. All aisles, exits, fire extinguishing equipment, eyewashes, safety showers, electrical disconnects and other emergency equipment shall remain unobstructed. All labels shall face front. All chemical wastes will be disposed of in accordance with approved University and Departmental procedures.

Safety and Emergency Equipment

Telephone numbers of emergency personnel, supervisors, and other workers as deemed appropriate will be posted near the inside of the door entrance of labs and stock rooms. All laboratory personnel will be trained in hazardous material handling and the proper use of fire extinguishers. All employees and students shall be instructed in the location and proper usage of emergency showers and eyewashes as appropriate. The eyewash and emergency shower shall be inspected regularly. First Aid Kits shall be inspected and stocked regularly. It is the responsibility of any employee or student to know the location of all safety and emergency equipment in an area they are working in.

All chemical containers shall be placed as close as possible to the rear of chemical fume hoods. Clear the screen on the face of the hood prior to usage. Hoods shall be kept clean and uncluttered. The chemical fume hoods shall be inspected regularly. Keep the sash of the hood closed at all times except when

adjustments within the hood are being made. At these times, maintain the sash height as low as possible. Storage of chemicals and equipment inside the hood shall be kept to a minimum. Storage cabinets for flammable and hazardous chemicals will be ventilated as appropriate.

Off-Hours Work Procedures

Laboratory personnel are not permitted to perform laboratory work after 10:00 PM, except when permitted by the Department Head. No employee or graduate student is permitted to work alone in lab after standard work hours, unless another person in the building is aware they are working in that lab. Undergraduates, even if they are employed by the University, are not allowed to work alone. All hazardous operations are to be performed during a time when at least two personnel are present in the laboratory. The determination of hazardous operations shall be made by the Department Head in consultation with the Safety Officer. When laboratory operations are performed which will be unattended by laboratory personnel (continuous operations, overnight reactions, etc.), the faculty member must leave emergency contact information clearly available and must ensure all precautions have been taken.

The Department Head has the ultimate responsibility for chemical hygiene throughout the Department and, with the assistance of faculty and staff, will provide continued support for chemical hygiene.

The Chemical Safety Officer (CSO) will work with administrators and other employees to develop and implement appropriate chemical hygiene policies and practices. The CSO will perform ongoing chemical hygiene and housekeeping inspections including inspections of emergency equipment. The CSO will help train Teaching Assistants and Faculty in appropriate safety procedures and will ensure that appropriate training and training records are kept. The CSO will maintain current knowledge concerning legal requirements of regulated substances in the laboratory. The CSO will monitor the waste disposal program in all departmental laboratories and ensure that waste disposal is handled according to OSHA, EPA, and College procedures.