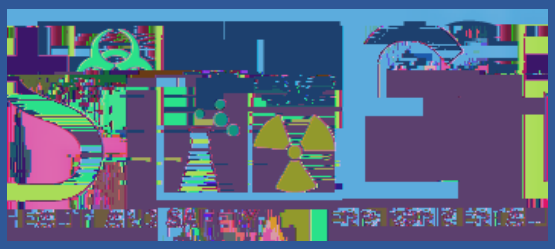

Lab Chatter

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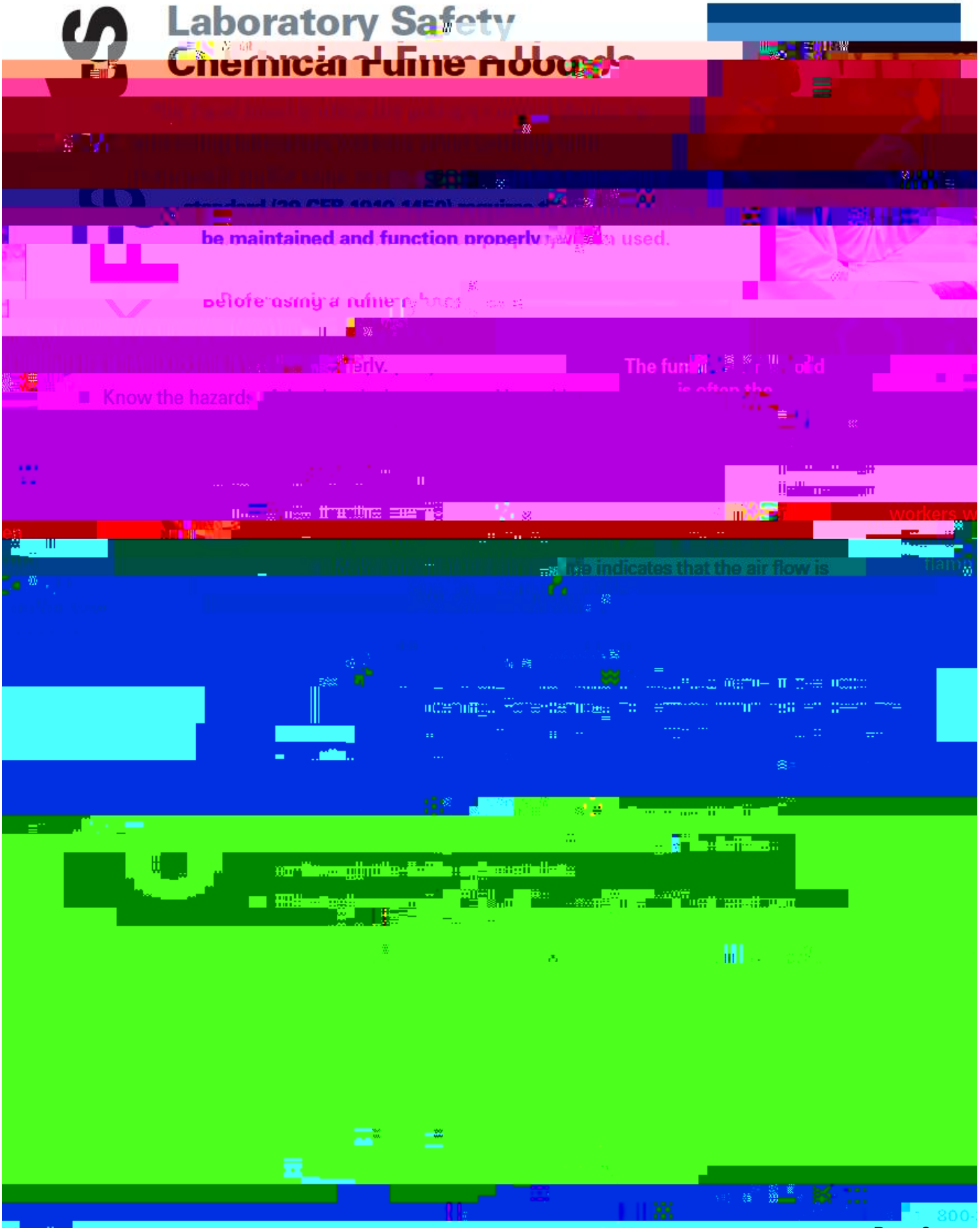



Laboratory Safety
OSHA QUIZ

(Submitted by Jessica Tyre)

Let's face it: most laboratories use chemicals. Depending on the lab's focus—research synthesis, compound production, basic acid digestions, etc.—the types and amounts of chemicals used can vary greatly. Unfortunately, reports of accidents and incidents involving the use and storage of chemicals are far too frequent. We must remain diligent in properly handling and storing these hazardous materials, or problems will arise. So, in this column we provide general safety rules of thumb for handling and storing chemicals in the laboratory.

Before we get into the details, it is important to take stock of the many federal, state, and local regulations that may include specific requirements for handling and storing chemicals in labs and stockrooms. For example, controlled substances and consumable alcohols are regulated by the Food and Drug Administration and the Drug Enforcement Agency, radioactive substances are regulated by the Nuclear Regulatory Commission, and hazardous wastes are governed by the Environmental Protection Agency. These specific requirements can range from simple locked storage cabinets and specific waste containers to controlled access for regulated areas. If any of your labs are using or generating potentially hazardous substances, determine which regulations apply and the specific requirements they impose. State or local building and fire codes are very common, and applicability is becoming more demanding each year.

Another hurdle frequently encountered is the fact that labs evolve and change over time. We need to focus awareness on our lab facilities and implement a regular (annual) review process to ensure our overall laboratory safety stays up to date.

The focus of this article is safe storage of chemicals. But before we start rounding up bottles of chemicals and reorganizing it84bs e localB3TGEr53.2-8B7TmsTm

Here are our pointers for moving chemicals safely:

Never move visibly degrading chemicals and containers. Report these to your lab supervisor or principle investigator.

Whenever transporting chemicals, place bottles in appropriate, leak-proof secondary containers to protect against breakage and spillage. A good example is using a special plastic tote for carrying four-liter glass bottles of corrosives or solvents.

When moving multiple, large, or heavy containers, use sturdy carts. Ensure cart wheels are large enough to roll over uneven surfaces without tipping or stopping suddenly. If carts are used for secondary containment make sure the trays are liquid-tight and have sufficient lips on all four sides.

Do not transport chemicals during busy times such as break times or (for those academic laboratories) lunch periods or class changes.

Use freight elevators for moving hazardous chemicals whenever possible to avoid potential incidents on crowded passenger elevators. Remember to remove gloves when pushing elevator buttons or opening doors.

Never leave chemicals unattended.

Safely storing chemicals in a laboratory or stockroom requires diligence and careful consideration. Correct use of containers and common lab equipment is critical. To store chemicals safely, DO the following;

Label all chemical containers fully. We recommend including the owner's or user's name along with the date received.

Provide a specific storage space for each chemical, and ensure return after each use.

Store volatile toxics and odoriferous chemicals in ventilated cabinets. Please check with your environmental health and safety personnel for specific guidance.

Store flammable liquids in approved flammable liquid storage cabinets. Small amounts of flammable liquids may be stored in the open room. Check with your local authority (e.g., fire marshal, EH&S personnel) for allowable limits.

Separate all chemicals, especially liquids, according to compatible groups. Follow all precautions regarding storage of incompatible materials. Post a chemical compatibility chart for reference, both in the lab and next to chemical storage rooms.

Use appropriate resistant secondary containers for corrosive materials. This protects the cabinets and will catch any leaks or spills due to breakage.

Seal containers tightly to prevent the escape of vapors.

Use designated refrigerators for storing chemicals. Label these refrigerators CHEMICAL STORAGE ONLY—

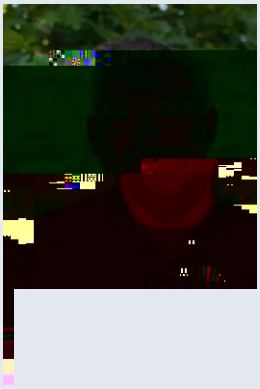
UNE Chemical Sharing Program

The UNE Chemical Sharing Program is a great way to reduce hazardous waste, reduce costs for your department, and have a positive environmental impact on campus. If you have any commonly used lab chemicals that you are thinking of disposing, please contact EHS so they can be listed in the next issues of EHS Lab Chatter as available for the UNE Chemical Sharing Program.

Chemicals currently available due to a professor's retirement:

Azure B	Gold Chloride	Succinic Acid
Aniline Blue	Hydroquinone	Sodium Phosphate x2

Contact us



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