

MBAA Safety Toolbox Talk



Laboratory Safety

Overview

Laboratory safety is pivotal to many industries, including brewing. Lab workers are faced with chemical, biological, and radioactive hazards. Many different chemicals are used in lab settings, which require proper training and guidance to keep everyone safe.

General PPE and Safety

Monitoring and assessment of the hazards in the lab setting must be done prior to choosing the proper PPE.

- Eye and face protection (safety glasses, goggles, face shields, etc.) must be worn in areas where there are flying particles, liquid chemicals, acids or caustic liquids, chemical gases or vapors, and potentially injurious light.



- Respiratory protection may be needed where chemical exposure limits cannot be controlled with engineering controls and equipment.
- Hand protection (nitrile gloves, Kevlar, etc.) must be provided where chemical absorption, lacerations, or burns could occur.
- No food should be in production areas

Hazard Communication around Specialty Chemicals

Labs frequently contain hazardous compounds that present different threats than typical production chemicals. It is important to communicate the name of the chemical and potential threats

Eyewash and Safety Shower

According to OSHA standard 1910.151(c) "Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use." Installing an emergency eyewash and safety shower combo will protect your employees in an emergency.

Fume Hood

The primary engineered protection from chemical inhalation hazards in the laboratory setting is a fume hood. All chemical SDS should be reviewed for inhalation hazards and exposure limits to decide if fume hood use is necessary. Proper use is vital to safety; before using the fume hood:

1. Check for any cracks or damage.
2. Make sure the air gauge is within 20% of the marked proper pressure (usually 60fpm-100fpm)
3. Slide the sash to the proper height required for optimal usage and visually check baffles are not blocked and evenly spaced.

When working in the fume hood:

1. Work 6" within the hood and keep all containers closed that are not being used.
2. Extend only arms and hands into the hood.
3. Change baffles based on heat and vapors used in the hood.
4. Use secondary containers to prevent spills and accidents.
5. Do not use it for storage and close the sash when done working.



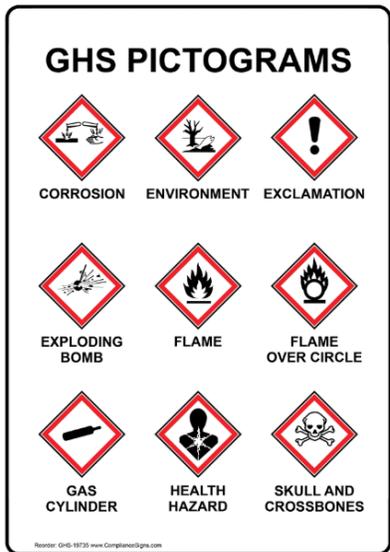
In addition, fume hoods should receive preventive maintenance and flow rate checks as per manufacturer recommendations. This will protect the health and safety of the employees who use this equipment regularly.

Secondary Containers

When you transfer a chemical from its original container to another container, the container you transfer it into is called a "secondary container". All secondary containers must have proper identification which includes chemical name, and hazard identification. The only exception to secondary

container labeling is when an employee transfers the chemical from a labeled container into a secondary container and it is intended only for the immediate use of the employee who made the transfer.

The Global Harmonized System pictograms (which have been adopted by OSHA's Hazard Communication Standard) are a recommended way to notify employees of the hazard on the secondary label.



- Determine the proper container based on the hazardous substance.
- Proper storage area depending on the hazardous characteristics.
- Ensure the disposal company is properly handling the chemical.
- Ensure manifests and records are kept on file for disposal.
- Training for the employee handling chemicals which includes getting processed for disposal.

Bloodborne Pathogens

The OSHA Bloodborne Pathogen standard is intended to protect workers from all known and as yet, unknown diseases transmitted by blood. The viruses of greatest concern at present, however, are HIV, hepatitis B, hepatitis C and those found in human derived cell lines.

With the use of different styles of glassware, needlesticks and sharps increases the chances of bloodborne exposure. The following recommendations should be put into place to reduce bloodborne illnesses:

- Use of a sharps container to dispose of all needles, sharps, and broken glass.
- Use of proper PPE
- Training and implementation of universal precautions recommended by the CDC
- Complete a risk assessment on all potential bloodborne pathogen hazards, and put hazard controls in place.

Chemical Mixing and Disposal

Brewing lab analysis' can include mixing of different chemicals. Precautions must be taken to make sure a hazardous chemical reaction does not occur. The use of proper PPE and fume hoods will help protect these job tasks. Always follow a standard procedure for the analysis.

Sources:

- [Emergency Eyewashes- MBAA ToolBox Talk](#)
- [EPA Hazardous Waste](#)
- [OSHA Laboratory Guidance](#)
- [Bloodborne Pathogens - MBAA Toolbox Talk](#)

If you have any questions regarding this, please see your supervisor or manager or a member of the Safety Committee.

FOR MORE INFORMATION ON BREWERY SAFETY, PLEASE VISIT THE MBAA BREWERY SAFETY WEBSITE AT:
<http://www.mbaa.com/brewresources/brewsafety>

Chemicals left from a finished analysis have the potential to be considered 'hazardous waste'. Hazardous waste must be disposed of properly. To do so, reach out to a local hazardous waste disposal company for guidance. The following should be kept in mind: