

Chemical Engineering Student Safety Team (ChESST)



November Safety Newsletter

5 mins read

ChESST @ 37thOChEGS Symposium



Safety Tip of the month: Wear your PPEs in labs!

If you work in a lab, you can protect yourself from exposure to hazardous materials through appropriate laboratory attire and personal protective equipment (PPE). All personnel are recommended to wear lab coats, eye protection, and proper gloves when working in a lab. Proper PPE and laboratory attire help minimize the potential for skin exposure to hazardous chemicals, biological agents, and other hazardous materials. Make sure your legs are covered and you wear closed toe shoes. Additional PPE such as face masks or respirators may be needed for specialized tasks.

Did you know...?

A variety of hazards exist in the laboratories at the University of Houston. The risks associated with these hazards are greatly reduced or eliminated if proper precautions and practices are observed in the laboratory. To manage these risks, and in response to a heightened concern for safety in the workplace, the University of Houston has developed this General Laboratory Safety Manual (GLSM).

Safety Story of the Month:

"The swiss cheese model of process safety asserts that incidents propagate when a combination of failures (holes) align. I operate a microcalorimeter and work on one particularly energetic reaction using a stainless-steel vial fitted with a pressure transmitter. Once. while loading the ingredients, the reaction kicked off and one of the reactants boiled out of the vial. It was an activity I had performed many times before, but I must have unknowingly elevated the catalyst level. In the worst-case scenario, the catalyst charge would have been slightly less, and I would have been screwing the lid on the vial (hole 1). The vial is fitted with a small relief device, but I have no idea if that device could have removed pressure at the correct rate (hole 2), if the calorimeter would have started controlling the temperature before the pressure began to build (hole 3), or if the final pressure would have exceeded the rating of the vial (hole 4). After this, I removed the capability to use this vial for any exothermic reactions. The lesson here is that just because an activity has been done before, there is no guarantee it may be done again without consequences. While there may have been other layers in place to prevent an event, we should not assume they will always protect us".

> - Dale E. Green Graduate Student

Do you have any experiences related to safety to share with us? Send your stories to <u>UHChESST@gmail.com</u> and we will have them in our upcoming newsletters!

Have a question? Need some clarifications? Contact us at UHChESST@gmail.com