The new guy
HAZ MAT Chemist

My name is Eric Johnson. I'm the new Hazardous Materials Chemist within the REM Hazardous Materials Management group, and I'm replacing Amy Theivagt as the author of the Lab Safety Newsletter. I hope to maintain the high standard Amy set with the past newsletters.

This is my second time to be employed at Purdue. Between 2006 and 2008, I was a masters student in the Agronomy Department. I completed my masters work in soil chemistry and became an Environmental Chemist with the Indiana Department of Environmental Management (IDEM). While gaining regulatory experience at IDEM, I decided that I wanted to play a more active role in hazardous materials management; and I believe there is no better place than Purdue to do so.

While here at Purdue, I hope to provide excellent waste management and lab safety service to graduate students and researchers across campus. Please don’t hesitate to contact me with any questions.

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Lab Coat Selection
Do you have the right lab coat?

The Lab Safety Newsletter has previously discussed the importance of wearing a lab coat while working with chemicals or biologicals in the lab; however, how do you know if the lab coat you’re wearing will protect you from all the potential hazards you face?

First, you should know that not all lab coats are equal. Generally, lab coats are made of one of three materials: 100% cotton, cotton/polyester blend, or cotton woven with an inherently flame resistant, or FR, material.

With these options, which material of coat should you be wearing?

To determine if you need an FR coat, ask yourself these questions: 1) do I work with large volumes (>1L) of flammable liquid?, 2) do I work with an open flame and smaller volumes of flammables?, and 3) do I work with pyrophoric materials? If you answered yes to any of these questions, you should be wearing an FR lab coat. FR coats will provide additional protection from flash fires and so they should be worn if a risk of fire exists in your lab. It’s important to know that lab coats made of a cotton/polyester blend will actually do more harm than good when worn as fire protection. The coat, if exposed to flame, will not only burn, it will melt to your skin! Check the tags on your lab coats to make sure that you’re not wearing one made of a cotton/polyester blend. At a minimum, wear a 100% cotton coat, and if there is any chance someone in your lab will work with open flames, flammable material, or pyrophorics, everyone in the lab should wear an FR coat.

If you determined that you need to wear an FR lab coat but you don’t know where to order one, below are links to a couple FR coat manufacturers:

Workrite
Bulwark
White Knight
The Chemical Hygiene Plan (CHP) Online Module is up and running! To begin training, simply follow the link http://www.purdue.edu/ehps/rem/ and click on the first bulleted hyperlink to the “Chemical Hygiene Plan (CHP) Online Training”. On the next screen, click the hyperlink for the “Purdue University Lab Safety Fundamentals (LSF) online training”.

The purpose of the CHP Online Module is to heighten researcher awareness of the campus-wide CHP. Therefore, REM strongly encourages all faculty and staff to work through the CHP Online Module. Not only is it an interactive training module that covers the contents of the campus-wide CHP, which is required training for all lab personnel, it also documents your training. Once you’ve completed the CHP Online Module, you only need to work through any additional training requirements your specific lab may have, such as hazard assessments and standard operating procedures.

A close call with trimethylaluminum

We recently had a very close call concerning a container of trimethylaluminum in a lab chemical storage cabinet on campus. It appeared to be an older container, which pressurized, ruptured, and coated the inside of the cabinet with chemical debris and glass shards (see picture below). Luckily, the compound did not react and ignite in the cabinet, which contained numerous bottles of other flammables and pyrophorics. We hope to use this as a reminder to routinely clean out cabinets, and look specifically for aged, highly hazardous materials, such as pyrophorics, water-reactives, and acutely toxic chemicals.