Chemistry Safety Notes

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"Chemistry Safety Notes" is published by the Chemistry Dept. Safety Committee, written & edited by Debbie Decker, Safety Mgr.

EH&S Inspections

EH&S Laboratory Specialist assigned to M&PS, Crystyn Chase, has begun her inspections of the Department. Overall, those she has visited are doing very well. Documents in order, training records up to date – excellent job! However, there are some recent changes in EH&S mandates for us, with which we are not entirely compliant.

First, we are being required to test eyewashes and safety showers in the labs monthly and to document the testing. This is a functional check to make sure the eyewash and shower turn on and turn off, and that water flows out of the fixtures. If you need help or advice about how to accomplish the testing, please let me know.

Secondly, we're also being required to inspect fire extinguishers monthly. On the fire extinguisher, there's a green tag with the fire marshal stamp on one side. On the reverse, there's a list of months with a blank alongside for the initials of the person inspecting. The inspection is to make sure the pin and plastic seal are intact. If either of these items is missing, it means the extinguisher was discharged and needs to be serviced or replaced by Fire Prevention Branch.

Remember – EVERYONE who works in the lab must have UC Laboratory Safety Fundamentals training within the last 3 years. If you or one of your workers has taken my Chemical and Laboratory Safety Training in the past 3 years, taking the online Fundamentals training is not required.

This Month's Kudo

To the Berben lab! They were very pro-active, testing their eyewash and shower monthly. I'm told the undergraduates, in particular, like to test the shower. ***Thanks for a job well done!***

Hazardous Waste Management

In my travels, I've noticed some issues around hazardous waste management and "discarded" materials, in general. There are regulatory ramifications and it's important to understand those ramifications. Please do not label any material with the word "waste" unless you intend for it to be disposed as hazardous waste. "Spent" is probably a better word to use.

Proper labelling: Label chemical waste you intend to dispose through the Campus hazardous waste program, using the approved label. The most current label is dated "01/11" in the lower right hand corner. DO NOT USE ANY OTHER LABEL! They are not compliant. If you have a stash of two-part labels or similar, please recycle them.

Accumulation Start Date: Waste containers must be labelled with a hazardous waste label when the first drop of waste goes into the container. The date the first drop of waste goes into the container is the accumulation start date. You have 9 months from that date to have the waste container removed from your lab. The accumulation start date is also the date you decide when a commodity chemical has no further use to you and you intend to dispose of it as hazardous waste.

Secondary Containment: Please put your hazardous waste containers in secondary containment – a dish tub or similar is fine. It's also a good idea to send folks to Hazardous Waste Management and Minimization training. This 2-hour instructor-led training is offered every other month and you can register at lms.ucdavis.edu.

It's the "Rheo Thing" shared a new poster intended to encourage employees to wear eye protection. Think it'll work? *Courtesy of Jyllian Kemsley – "The Safety Zone" blog at C&EN*

PPE – LHAT - Reminder

Personal Protective Equipment and Lab Hazard Assessment Tool

Please access the LHAT and create your profile, invite your lab workers, and accomplish the hazard assessment. Once the assessment is certified, your workers can access the assessment, take the very short required training and print their PPE voucher. If you need help, let me know. Your deadline is **January 10, 2014**.

Holiday Safety

The usual reminders apply: don't drink and drive and don't ride with someone who has been drinking. Lock your car and keep track of your belongings. Put your phone in an inside or front pocket to discourage pick pockets.

However, I do want to mention food safety, in particular. The holiday buffet and those hors d'oeuvres look yummy. But how long has all of that food been sitting out at room temperature? A good rule of thumb is no more than 2 hours at room temperature for those foods which are normally served hot or cold. You can leave food out longer, so long as temperature is maintained. For hot foods, maintain at 130F and for cold foods, maintain at 41F. A food thermometer is your friend!

Making sure to keep hot food hot and cold food cold will help to keep you, your tummy and your guests' tummies healthy over the holidays.

Incident of the Month

University of Tennessee has some excitement

KNOXVILLE — Officials reopened the Science and Engineering Research Facility at the University of Tennessee at 5:48 p.m. Tuesday (12/29) afternoon after a chemical release in a lab, officials said.

The incident prompted an evacuation, and the building was closed for about two hours.

Four students were taken to University of Tennessee Medical Center for observation. They did not appear to be injured.

The release has been contained to a first-floor laboratory, according to the University of Tennessee Police Department.

The Knoxville Fire Department responded to the scene at 1414 Circle Drive about 4 p.m., said Knoxville Fire Department Capt. D.J. Corcoran. Firefighters were dissipating the gas through ventilation.

The release occurred during an experiment involving boron trichloride, a colorless gas that is highly reactive to water.

Students who had been in the lab milled around Tuesday while firefighters worked inside. Many students had to leave with their belongings still in the research building.

http://www.knoxnews.com/news/2013/oct/29/ut-engineering-building-evacuated-after-chemical/?partner=RSS

Cranberries – *They're not just for turkey dinner anymore!*

By, Bethany Halford, C&EN Boston

Excerpted from Chemical and Engineering News, November 18, 2013.

For the past dozen years, Catherine C. Neto, a natural products chemist by training and researcher in the department of chemistry and biochemistry at the University of Massachusetts, Dartmouth, has been trying to pin down the precise chemistry that gives cranberries a reputation as a healthy food. The Pilgrims used them to prevent scurvy, finding little else in the New World that packed so much vitamin C. And cranberries have long been prized in folk medicine for their ability to keep urinary tract infections at bay.

But Neto says the cranberry contains compounds that may also provide protection from certain cancers, cardiovascular diseases, pathogenic fungal infection, diabetes, and other diseases related to oxidative stress and inflammation, such as Alzheimer's disease, Parkinson's disease, and stroke.

The results have been promising. Several compounds, including polyphenolic proanthocyanidins and flavonoids such as quercetin, have been implicated as capable of preventing cancer cell growth, inducing cancer cell death, and reducing oxidative stress. Neto says the next step is to move into animal studies to see whether these phytochemicals have cancer-preventing effects in living animals, such as zebrafish and mice.

Homing in on the mechanisms that underlie the cranberry's purported health benefits has been a priority for the cranberry industry, Neto says. But the research is not without controversy. Although the National Institutes of Health has sponsored some studies on the health effects of cranberries, much of the funding comes from producers such as Ocean Spray, cranberry advocacy groups such as the Cranberry Institute, and states such as Massachusetts where the cranberry is an important crop.