

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.

Extreme Heat

Here are some tips on staying cool and safe during extreme heat

Be familiar with your local weather forecast by visiting www.weather.gov

- Drink plenty of water and limit intake of alcoholic beverages. Persons who are on fluid-restricted diets; or have a problem with fluid retention should consult a doctor before increasing liquid intake.
- Check on family, friends, and neighbors who do not have air conditioning and who spend much of their time alone.
- Never leave children or pets alone in closed vehicles.
- Avoid strenuous work, outdoor games and activities during the hottest part of the day. Use a buddy system when working in extreme heat, and take frequent breaks.
- Hotter weather also affects pets, so remember to give them plenty of water and keep them inside. Check on your animals frequently to ensure that they are not suffering from the heat.
- Stay indoors as much as possible and limit exposure to the sun.
- Stay on the lowest floor out of the sunshine if air conditioning is not available.
- Dress in loose-fitting, lightweight, and light-colored clothes that cover as much skin as possible.
- Avoid dark colors because they absorb the sun's rays.
- Protect face and head by wearing a wide-brimmed hat or use an umbrella for shade.
- Avoid extreme temperature changes.

Heat kills by pushing the human body beyond its limits. In extreme heat and high humidity, evaporation is slowed and the body must work extra hard to maintain a normal temperature.

Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children and those who are sick or overweight are more likely to succumb to extreme heat.

Source: Yolo County <http://www.yolocounty.org/government/office-of-emergency-services/emergency-preparedness-resources/extreme-heat>



Impaired

Recently, a researcher related to me a story about one of her co-workers. This co-worker – let's call her Ann - wasn't herself. She'd been clumsy, had made a couple of simple but significant errors, and seemed frustrated and short-tempered. All of these behaviors were out of character for Ann. The researcher and another lab member engaged Ann in conversation and discovered that she hadn't been sleeping well, hadn't eaten that day, and couldn't remember if she'd eaten the day before. She had also created an artificial project deadline for herself which contributed to an already difficult research situation. The two researchers, senior to Ann in the lab pecking order, insisted she take a break and have some juice and a granola bar. And then, with the support of the PI, they sent her home to sleep and eat a proper meal. Ann was impaired. She was a danger to herself and to others in the lab.

"Impaired" doesn't just mean drunk or high. It can mean compromised because of prescription medication, lack of food or sleep-deprivation. It's important to pay attention to how you're reacting to stressors in your life. It's also important to pay attention to your friends and co-workers. There are resources available on the Chemistry Department website under the "Safety" tab. If you're uncomfortable approaching someone about whom you have concerns, please reach out to Brad, Perry, or me.

PPE Reminder

Yes, I know it's very hot. No, you can't wear shorts in the lab!

Lightweight scrubs, available in the Stockroom, are very comfortable and cool. And proper footwear should never be a question.

Covered legs and covered feet—always!



UC Away

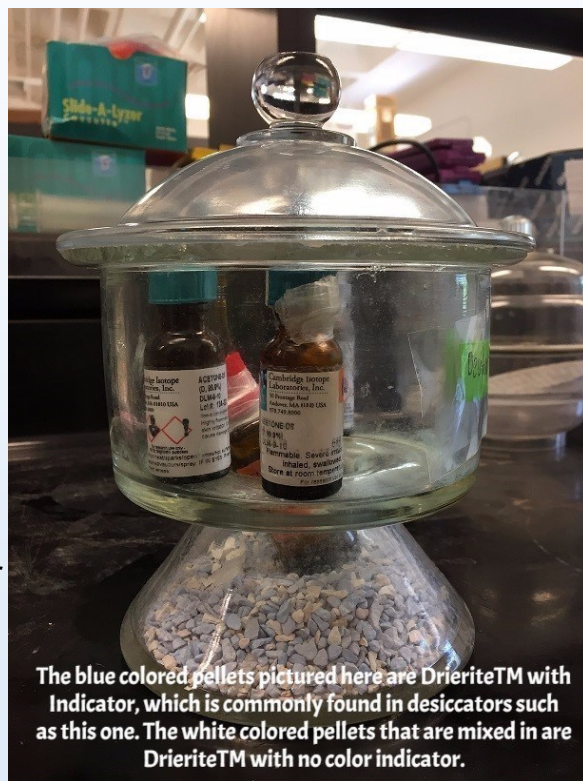
It's very important for UC travelers to register for the UC Travel Insurance programs. Individuals who are registered for insurance receive numerous benefits, including medical expense coverage, lost document assistance, security and extraction, and 24/7 monitoring of current travel alerts.

The easiest way to register for this insurance is to book your airfare through the Connexus online booking tool (BCD), available through the [Connexus](#) portal. This system automatically communicates with iJET's Worldcue system and begins the process of registering your trip for insurance. If you choose not to take advantage of the Connexus booking tool, you must register your out-of-state or international trip with [UC Away](#). After completing the simple trip information form, your travel insurance registration is transmitted to iJET and a "welcome email" is generated through iJET's Worldcue system and sent to the traveler.

Did You Know? Drierite™

Drierite™ is everywhere across the Department. That familiar blue- or pink-tinged desiccant, working hard to keep your samples dry: *Drierite™ with Indicator*. The color comes from the inclusion of 1-5% cobalt dichloride and it's this cobalt compound that makes *Drierite™ with Indicator* both a carcinogen (H351) and a reproductive hazard (H360).

While the exposure risks are low when undisturbed in a desiccator, care should be taken when changing *Drierite™ with Indicator* and when handling containers that may have residual powder on the outside. Be sure to handle your desiccant in a chemical fume hood to avoid exposure to the dust that arises when *Drierite™ with Indicator* is disturbed. Wash hands thoroughly after handling containers that may have been in contact with this material. Once *Drierite™ with Indicator* is spent, it can be regenerated by heating the granules for 1 hour at 210° C; however, if it is no longer needed, it must be disposed as hazardous waste through EH&S. *Drierite™ with Indicator* should be included in your chemical inventory and in your lab's SOPs for Carcinogens and Reproductive Hazards. Additional information can be found in the [product-specific SDS](#). Please note Drierite™ that does not include the indicator does not have any hazards associated with its use.



The blue colored pellets pictured here are Drierite™ with Indicator, which is commonly found in desiccators such as this one. The white colored pellets that are mixed in are Drierite™ with no color indicator.

Newsletter Survey—Results

Twenty four people responded to the survey and the overwhelming majority appreciated the newsletter, used it in training and as good general information. Most people also enjoyed the cat images (yay for cats).

There were several excellent suggestions which I will implement over the next few months.

And <drum roll, please> - Lucas Moore was the winner of the drawing! Lucas—come on by to pick up your swag.

Thanks!



This is Kuli, the surfing cat. Your argument is invalid because surfing cat is awesome.

Database of hazardous reactions launched

Tool allows scientists to submit and search for safety information not publicly cataloged elsewhere

By Jyllian Kemsley

A nonprofit group today released a database tool chemists can use to share information about hazardous chemical reactions. Called the Chemical Safety Library, the tool was developed by a group that included representatives from pharmaceutical companies and academic institutions.

"We feel this will be a valuable and unique set of data that is currently not available and should advance safety for all researchers," says Carmen Nitsche, executive director for business development in North America at the Pistoia Alliance, which brings together companies, vendors, publishers, and academic groups to address research and development challenges in the life sciences industry.

The project started when chemists at Bristol-Myers Squibb were looking for a better way to catalog and share information about lab accidents and other adverse events. Eventually the project landed at Pistoia.

"I didn't know if we were going to get any interest" in putting together the library, says Mark Manfredi, a business capability manager at Bristol-Myers Squibb. "But right from the first meeting, we had several organizations that were interested in participating."

To use the Chemical Safety Library, chemists must first register for an account. They can then start entering reaction information, including specific reagents as well as reaction class, hazard category, scale, warning message, and additional information such as a literature reference. Pistoia worked with Millipore Sigma and Biovia to preload more than 75,000 reagents to help ensure accuracy. Library administrators review submitted reaction entries to ensure they are appropriate.

Chemists may search the library for particular reactions or reagents or even download the full data set. An organization could incorporate downloaded data into an electronic laboratory notebook system to issue an alert when a particular combination of reagents associated with a known hazard is entered. Bristol-Myers Squibb is already using the data in an electronic laboratory notebook system and an ordering system, Manfredi says.

Pistoia sees the current library tool as an experiment to gather information about the willingness of the community to populate and use the database, Nitsche says. Pistoia will analyze database use to determine the resources and technology needed to sustain the library long-term.

The library will be a "wonderful resource" for researchers to use as an additional source of information when doing hazard and risk assessments of experiments, comments Bettyann Howson, chair of the American Chemical Society's Committee on Chemical Safety. ACS also publishes C&EN. C&EN plans to encourage scientists who submit safety letters to also enter the information into the Chemical Safety Library.

<http://cen.acs.org/articles/95/i12/Database-hazardous-reactions-launched.html>

Editor's Note: I've registered and poked around a bit. But it needs input from the community to become the resource envisioned.

