










Environmental Health & Safety

SafetyMatters

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ENVIRONMENTAL HEALTH & SAFETY

[HTTP://EHS.COLUMBIA.EDU](http://ehs.columbia.edu)

MEDICAL CENTER
601 W 168TH ST
SUITE 44, 53, 54, 56
PHONE: (212) 305-6780
EHS-SAFETY@COLUMBIA.EDU

MEDICAL CENTER RADIATION
PHONE: (212) 305-0303
RSOCUMC@COLUMBIA.EDU

MORNINGSIDE CAMPUS
419 W 119TH ST
NEW YORK, NY 10027
PHONE: (212) 854-8749
EHS@COLUMBIA.EDU

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An Open Letter to Laboratory Managers

by Jessica Phippard, Research Safety Specialist

Dear Laboratory Managers,

EH&S would like to extend a huge “thank you” for the amazing work that you do. Managing the juggling act of science and safety, and the execution of your duties requires a timely grace. Deadlines, grants, and service calls. Supplies, lab meetings, and protocols. And of course, correspondence with EH&S. You certainly are a special breed of awesome! Thank you for keeping an eye on all of the fine details that make for a safe and successful laboratory.

There is no doubt that your PI and lab-mates are also truly grateful for your dedication to a job well done. You are a leader, a caretaker, and a role model all in one - you develop and update the LATCH and Standard Operating Procedures (SOPs), ensure prompt renewal of training, and always wear proper work attire and Personal Protective Equipment. When it comes time for lunch, or a well-deserved coffee break, your absence from the laboratory is conspicuous, as you choose to consume your food and drink outside of the lab. You know your workspace like the back of your hand, and your impeccable records are a rich resource to us all.

As we begin a new year in 2015, please don't bear these burdens all by yourself; share the wealth of your knowledge and experience, and cross-train throughout the laboratory. Be sure that your colleagues are able to locate the LATCH, spill kits, fire extinguishers, and emergency eye wash and shower stations. Help them understand the importance of safety, encourage them to look out for one another, and steer them back when they veer off the path. It can be a tough job, but you're not alone. EH&S is here for you, just pick up the phone. We thrive on fostering relationships with the research community, and look forward to future collaborations.

Your Partners in Safety, EH&S

Greg Kwolek
Morningside Campus Manager and contact for Lamont-Doherty Earth Observatory, Nevis Laboratories, Barnard College

Kathy Heinemann
Graduate School of Arts and Sciences Laboratories

Augustine Ogonnaya
School of Engineering and Applied Sciences Laboratories

Tasha Hightower
Medical Center Manager

Christina Clark
Physicians & Surgeons Building

Corey Wintamute
Hammer Health Sciences Center NYSPI (Kolb Annex & Pardes Building)
Center for Infection and Immunity (ARB) & PET Center (ARB)

Jessica Phippard
Russ Berrie Pavilion, Irving Cancer Research Center, Mary Woodard Lasker Building, Pathology Labs (including CHONY & VC), Eye Institute & Annex

Roberto Velez
Black Building, Vanderbilt Clinic, Presbyterian Hospital Laboratories

Spotlight on Safety by Chris Pitoscia, Manager of Research Safety

EH&S website offers enhanced navigation <http://ehs.columbia.edu>

When working in the laboratory, eating, drinking or applying cosmetics is prohibited.

Proper work attire (long pants, closed toe shoes) and PPE (e.g., laboratory coat, gloves and eye protection) must be worn when working in the laboratory.

[On-line Chemical Waste Pick-up Request Form](http://ehs.columbia.edu/ehs/wastepickup)
<http://ehs.columbia.edu/ehs/wastepickup>

For Lab Fire Safety Prevention tips, check out FDN(wh)Y Me <http://www.ehs.columbia.edu/FDNYMe.html>

Accidents can happen at any time and to anyone. Even highly trained researchers with years of education and experience can find themselves confronted with a spill. Would you know what to do if you or a colleague were in danger?

For this edition of Spotlight on Safety, EH&S spoke with Anne, a fourth-year Columbia MD/PhD student. On a Monday afternoon last November, Anne was working on a DNA extraction - a procedure she completes on a weekly basis - when her pipette tip caught a test tube she was using and knocked its contents, a phenol-chloroform solution, onto the bench and her legs. Thankfully, she was wearing long pants and a lab coat, both of which she was quick to remove. Anne has since fully recovered, and told us about the experience:

"When the spill happened, I immediately let everyone in the lab know. My Lab Manager was calm, was able to quickly access the Safety Data Sheet, and helped respond. Another lab member literally carried me to the sink to rinse off the area."

"It made me realize that we might not consciously understand that we are responsible for one another in the lab, but we are. I'm glad that collectively we were able to recall our training, think clearly and react. EH&S responded within minutes, as well."

When asked about whether the incident has changed her approach in the lab, Anne replied that she is very careful to not become lax about working with hazardous materials. She now takes additional time to think about her experiment and consider whether she is prepared, whether she is wearing the right clothing (a pair of long pants or the equivalent, with closed toe shoes!) and personal protective equipment, and even considers standing, versus sitting, at the lab bench to remain agile.

Finally, Anne reflected on how the incident could have been different, especially if she had been working alone. *"I hope people read this and pay attention. Remind yourself of the hazards of the materials you are using, and don't become complacent."*

These excellent pointers are useful for anyone, regardless of experience level. Stay informed and aware; your safety or that of your colleague may depend on it!

Laboratory Laser Safety Update by Ian Broderick, Associate Health Physicist

EH&S is beginning to re-energize its LASER safety program. A collaboration is underway between EH&S's Radiation Safety and Research Safety Programs to refresh the class 3b and 4 LASER inventory University-wide.

Safety concerns related to Class 4 LASERs are particularly important as their hazards include fire, as well as potential eye and skin damage; even an indirect beam exposure can be dangerous. These hazards will be evaluated during the inventory effort and EH&S will review proper safety measures, such as protective equipment, geometry, authorization, training and periodic inspections.

Information on LASER class hazards, equipment registration and the University's LASER Safety program and policies can be found on EH&S's webpage at <http://ehs.columbia.edu/LaserSafety.html>.

Changes to OSHA Incident Reporting

by Jim Kaznosky, Manager of Environmental and Occupational Safety Programs

The Occupational Safety and Health Administration (OSHA) announced a final rule revising the requirements for reporting work-related fatality, injury and illness information, effective January 1, 2015. The new rule retains the requirement to report all fatalities to OSHA within eight hours, but amends the regulation to require employers to report all work-related in-patient hospitalizations, as well as amputations and losses of an eye, to OSHA within 24 hours; inpatient hospitalizations must be reported only if they occur within 24 hours of the incident. OSHA defines inpatient hospitalization as a formal admission to the inpatient service of a hospital or clinic for care or treatment.

In order to streamline reporting for the University community, EH&S serves as the University-wide reporting entity for OSHA-reportable incidents. In the event of a workplace incident, the manager of the employee involved in the incident should send an email to occusafety@columbia.edu, with the subject line “**Urgent - OSHA Reportable Incident**” and include the following information:

- ◆ Brief description of the work-related incident
- ◆ Location of the work-related incident
- ◆ Time of the work-related incident
- ◆ Type of reportable incident (i.e., fatality, inpatient hospitalization, amputation or loss of eye)
- ◆ Number of employees who suffered the incident
- ◆ Names of the employees who suffered the incident
- ◆ Contact person and his or her phone number

EH&S wishes to thank all University personnel in advance for taking note of these new requirements. Let us hope that they are not needed!

ChemTracker & Recycling: Smartphone Option

by Kathy Heinemann, Research Safety Specialist

If you're a scientist today, you're probably conscious of recycling. Or maybe you just find it convenient to re-use your 4L amber bottles for liquid waste collection! We're all familiar with Columbia's hazardous waste [pick-up request](#) for chemical disposal. But if you're at the Morningside campus, how do you recycle your empty containers while maintaining your laboratory's ChemTracker inventory? Normally, the empty containers are placed in the yellow bins in the hallways. But now we have a smartphone option, featured in our Insider's Guide to ChemTracker, so you can reuse your empties and keep the barcoding requirement at Morningside.

There are two ways to reuse your empty bottles. After verifying the waste chemical's compatibility with your empty container (see our Spring '14 article [here](#)), you must remove the barcode of the empty bottle from the inventory. Barcodes can be physically removed – they peel off easily – and can be stuck to a piece of scrap paper that goes into the yellow bin. Or, simply take a picture of the barcode with your smartphone and email it to chemtracker@columbia.edu with the word “empty”.

The only exception to this is an empty container from a P-listed chemical. P-listed chemical bottles, marked with the pink circular sticker, are collected as hazardous waste even when empty. Don't worry, your Hazardous Materials Specialist will remove these barcodes for you! For more information, please visit the ChemTracker website at: <http://www.ehs.columbia.edu/cms.html>.

Are All of Your People Accounted For? by Matthew O'Hanlon, Senior Fire Safety Officer

If the fire alarm sounded or an emergency necessitated a building evacuation, where would the personnel from your office, lab or work area meet to ensure all faculty, staff and students are safe and accounted for? If you are unsure, the time to develop an “emergency action plan” is now, before an event happens.

A good emergency action plan will include the following components:

- ◆ Location of the closest emergency exits
- ◆ Knowledge of alternative exits
- ◆ A designated primary meeting location (a.k.a. muster point)
 - ◇ Permanent, specific and identifiable location that faculty, staff and students in your work area are familiar with, such as a building, statue, landmark, etc.
 - ◇ Should be remote from the evacuated building
 - ✦ Proximity to building might not be safe
 - ✦ Access to building must remain clear for Emergency Responders
- ◆ Identification of a secondary meeting location
 - ◇ Extreme weather may warrant an indoor muster point
 - ◇ Magnitude of emergency (major gas leak, terrorism, etc.) may warrant a location further away from your primary muster point

Once assembled, plan to take a physical head count at the muster point rather than relying on electronic communication. In the past, during major events, electronic communication has been compromised by call and data traffic related to the event itself, or by the authorities for safety reasons. To ensure accountability, if you need to leave after meeting at your pre-determined location, inform more than one person from your office or work area.

A fire or emergency can happen at any time. Account for your safety and the safety of your group by preparing a good evacuation plan including an agreed upon meeting location.

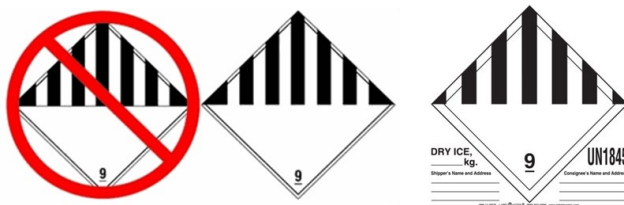
Call Public Safety to report a fire or emergency: CUMC (212) 305-797 Morningside (212) 854-5555

Please contact EH&S Fire Safety with questions: fire-life@columbia.edu

Shipping With Dry Ice? There's A New Label For That

by Aderemi Dosunmu, Biological Safety Officer

Does your laboratory ship packages with Dry Ice? Please be aware that as of October 1, 2014 the USDOT, IATA and ICAO introduced new labels for placement on packages containing Dangerous Goods. The new Class 9 Dry Ice label removes the black horizontal line at the bottom of the vertical lines. Pictured is the old label alongside two images of the new label:



Shippers should order replacement labels from a supplier of these items, such as Grainger. EH&S can provide limited numbers for those who need to ship before their new labels are received. In addition, there is a new Class 6 Infectious Substances label. The new label for shipping Category A Substances removes the outer diamond and states that “In case of damage or leakage immediately notify the Public Health Authority”. Pictured is the old label and an image of the new label:



Please note that RASCAL certification courses do not cover shipment of Category A substances. EH&S must be notified of any intention to ship Category A substances (UN2814 or UN2900), so we may assist in the safe packaging and compliant documentation of such shipments. Contact EH&S at hazshipping@columbia.edu.

Columbia University Receives Environmental Excellence Award from NYS Department of Environmental Conservation

by Shane Son, Hazardous Materials Specialist

Columbia University continually strives to be a leader in environmental performance. It recently received the first LEED-ND Platinum certification in New York City - the first Platinum certification for a university campus plan nationally, for our Manhattanville campus, and the EPA Environmental Quality Award for the University's Clean + Go Green Program, the highest recognition presented to the public by the EPA. Columbia's pioneering spirit is evident.

On January 14, 2015, this tradition of excellence continued as William Hichak, Director of Laboratories, Department of Dermatopathology, along with Columbia EH&S' Shane Son and Nicholas Craig, Hazardous Materials Specialists, and Chris Pettinato, Executive Director, accepted the Environmental Excellence Award from the New York State Department of Environmental Conservation at the DEC's 11th Annual awards ceremony in Albany, NY.

Columbia University was honored for its solvent recycling program at the Medical Center and Morningside campuses. Solvent recycling launched in early 2001 after months of research focused on creating an environmentally sustainable program to reduce chemical waste, as well as annual expenses. The Department of Dermatopathology and Pathology, the largest chemical waste generators at CUMC, use alcohol and xylene in a variety of tissue-processing and staining procedures, which support critical patient care functions. After a pilot project to confirm that reuse of purified, recycled solvent would not have any impact on the quality of tissue processing activities, both laboratories went fully operational with recycling and have been doing so ever since. With the success of the program at CUMC, EH&S launched two more solvent recyclers at the Morningside campus in 2008 and 2011, to accommodate the Chemistry Department, as well as the Biological and Engineering Departments.

After successfully implementing solvent recycling 14 years ago, the benefits are clear: tens of thousands of gallons of solvents have been recycled and millions of dollars have been saved in traditional purchase and disposal cost. The Environmental Excellence Award is just icing on the cake!

To read more, please visit:

- ◆ NYSDEC Environmental Excellence Award: http://www.cumc.columbia.edu/publications/in-vivo/Vol1_Iss3_feb11_02/around-and-about.html and <http://www.dec.ny.gov/press/100315.html>
- ◆ LEED-ND Platinum Certification: <http://news.columbia.edu/oncampus/2751>
- ◆ EPA Environmental Quality Award: <http://facilities.columbia.edu/clean-go-green-program-wins-epa-environmental-quality-award-april-27-2012-0>



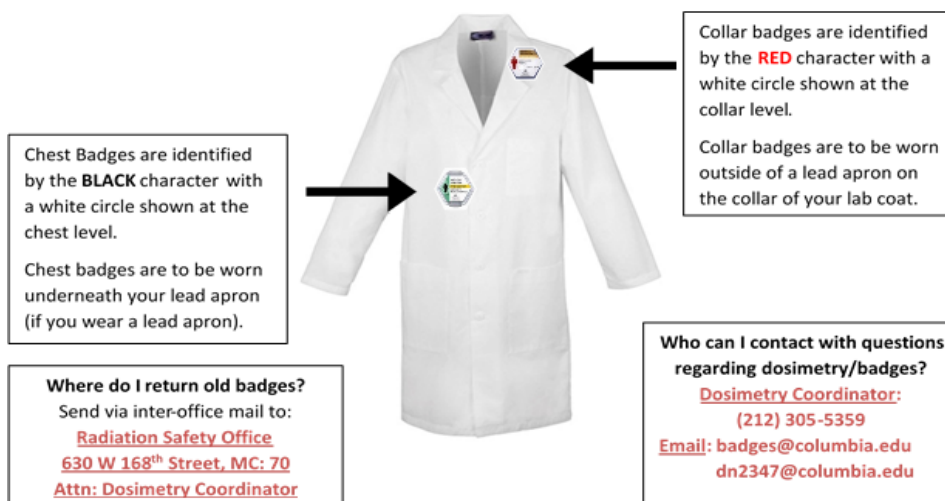
Working with Radiation? You need to read this ... no, seriously ...

by Max Amurao, Director, Clinical Radiation Safety Programs

Personnel dosimeters (radiation badges) are used by faculty, staff, and students to gauge the level of radiation dose one may have accumulated over a period of time. Most individuals are issued badges by EH&S which are exchanged quarterly, but some are on a monthly badge exchange cycle.

If you work with radiation, wouldn't you want to know how much radiation dose you received while working? (Hint – the correct answer is “Yes”). The most efficient way of knowing your occupational dose is by properly wearing your dosimeter and returning the dosimeter soon after the wear period.

Properly wearing the badge you say? The picture below will give you an idea:



After being returned by the wearer, the badges are sent to a laboratory for analysis. The badge data is evaluated by the University's Radiation Safety Officer (RSO) to verify that doses are consistent with ALARA principles and below regulatory limits. This is the most important reason for returning all badges at the designated end of the wear period. Timely return is important to ensure appropriate action can be taken to reduce future exposure, if warranted.

Do: Wear dosimeters during procedures involving radioactive materials or x-rays.
Return badges at the end of the wear period.
Report lost badges and fill out a lost badge form.-

Don't: Share or discard badges.
Bring badges home or use the badge at another place of work.

Aren't you glad you read this article and clearly understand how following proper radiation dosimetry protocol is in your best interest? (Hint – the correct answer is “Yes” again).

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Editorial Staff: Kathleen Crowley, Chris Pettinato, Chris Pitoscia
Graphics, Design, Lay-out: Jean Lee

Please share questions or comments with us at newsfeedback@columbia.edu