THE UNIVERSITY OF IOWA

ENVIRONMENTAL HEALTH & SAFETY

LABNEWS

PH: 335-8501 • research.uiowa.edu/ehs • FAX: 335-7564 • January 2011

Stem Cell Research

In March 2009, President Obama issued an Executive Order: *Removing Barriers to Responsible Scientific Research Involving Human Stem Cells*. The *National Institutes of Health Guidelines for Human Stem Cell Research (Guidelines)* implement this Executive Order as it pertains to extramural NIH-funded stem cell research. The University of Iowa is responsible for ensuring that all stem cell research conducted at or sponsored by the University complies with the *Guidelines*. Compliance authority on campus is placed with the Human Pluripotent Stem Cell Committee (hPSCC); administrative support for the committee is provided by Haley Sinn, Biological Safety Officer in EHS. The hPSCC reviews stem cell research and approves those projects in conformity with the *Guidelines* and in accordance with the general principles expressed in the *Guidelines for Human Embryonic Stem Cell Research* (National Academies' of Science, 2005) and its subsequent amendments. A new question has been added to the UI Routing Form and beginning in 2011, EHS will make available to PI's a stem cell registration document. Please visit EHS's website at*: https://research.uiowa.edu/ehs/files/documents/biosafety/hPSCCpgm.pdf,* for more information regarding the policy and procedures of the hPSCC and the stem cell registration document. As safety advisors begin the annual lab audits in January, a new question will be added to the audit form. Questions can be directed to Haley at 335-9553 or *haley-williams@uiowa.edu*.

New EHS Biosafety Student

Jory Hilpipre joined the EHS team as a temporary student worker in the Biosafety section. His primary task will be to update records of biosafety cabinets, and ensure the proper room number is listed for each piece of equipment. Look for Jory to stop by your lab space in the next few months!

Holiday Waste Pickup Schedule

	Hazardous
Monday (1/17)	University Holiday – No Pickups
Tuesday (1/18)	IREH, MTF, PHAR, PRL, JPP, RCP, JCP, GH (Hospital nursing units/patient areas)
Wednesday (1/19)	BB, BSB, VAMC, MERF, CB, IATL, SC, WP, OH & all other areas
Thursday (1/20)	DSB, EMRB, ML, MRC, MRF, BT, RCP (Hospital lab area & other hospital areas if needed.)
Friday (1/21)	No Pickups

Radioactive waste pickup schedule remains the same.

Fume hood vs. BSC

Annually, fume hoods need to be tested for proper performance and biological safety cabinets must be certified to ensure each cabinet is functioning as it was designed. Here are some tidbits of information to tell which is which:

Fume hoods

- AKA: "Chemical Hood"
- Personnel protection only
- Inward air flow
- For chemical use
- Generally attached to wall and building
- Often have chemical storage below
- Have neither HEPA filters nor UV lights
- Have horizontal, vertical, or combination sashes
- Most have monitors set to 100-120 fpm
- Performance test sticker from EHS
- Front airfoil at work surface level
- Poly resin or other chemical-resistant work surface

Biological safety cabinets

- AKA: "Tissue Culture Hood", "Bio Hood", "BSC", "Biosafety Cabinet"
- Class II BSCs offer personnel, product, and environmental protection
- Inward air flow
- For biological use
- Generally freestanding
- Have HEPA filters and some have UV lights
- Only have vertical sashes
- Most have no monitors, but have analog magnahelic gauges
- Front intake grill at work surface level
- Stainless steel work surface

For questions about proper fume hood and biological safety cabinet use, see the resources on the EHS website. If you experience fume hood problems call Facilities Management (335-5071); for performance testing or general questions call Rachelle Justice (353-4692). For all questions involving biological safety cabinets, call Cait Ross (353-5679).

Survey Coming Soon

In an effort to gain valuable feedback regarding our programs, EHS plans to conduct a customer satisfaction survey in late winter. We hope you will take the time to give us your perspective and any suggestions for improvement.

UI Crews to Use Eco-Friendly Deicer This Winter

(Originally Published by the Office of Sustainability)

University of Iowa landscape services crews will have a new weapon in the battle against icy walkways, steps and building entrances this winter – sugar beet juice. The crews will use ProMelt, an eco-friendly deicer that combines salt with a byproduct from sugar beet processing.

It's anticipated the product will provide better anti-icing and deicing performance than rock salt alone, reducing the number of applications and quantity needed. Scott Gritsch, manager with UI Facilities Management Landscape Services, anticipates using 30 percent less product this season to keep the walkways clear and safe.

"Our goal is to clear the snow early and down to the pavement so there isn't any re-freeze," said Gritsch. "This new product works at a lower effective temperature than salt and will begin to work quicker, too."

The product has a slightly tacky texture so there's no need to mix it with sand, Gritsch said. This will decrease the amount of dirt tracked into buildings, reducing damage to tiles and carpets and lowering the amount of clean-up the UI custodial team has to deal with.

Seeing is believing and safety is a priority, so UI officials are considering this first season a trial year for the product. In addition to gauging its effectiveness on snow and ice, Gritsch hopes to see reduced corrosion of concrete and damage to vegetation. The reduced environmental impact of the naturally derived material is manufactured in Waterloo, Iowa, and fits well with the university's commitment to sustainability.

"Water runoff from snowmelt eventually ends up in our storm drains and natural waterways, taking along with it any sand, salt and other materials it may have picked up along the way," said Liz Christiansen, director of the UI Office of Sustainability. "Facilities Management continues to investigate new products like ProMelt that are environmentally and fiscally responsible."

Rock salt and sand will still be used on roadways and on some heavily traveled walkways, and weather conditions will determine the type and blend of products used by the crews.

***UI Stormwater Management Program** (http://www.facilities.uiowa.edu/uem/stormwater.html)*

The University operates its own stormwater system under the EPA's National Pollutant Discharge Elimination System (NPDES) Phase II Program. The complete program the University is required to follow to maintain this permit is called a Stormwater Phase II Program. This program uses several techniques to reduce the amount of pollutants discharged, protect water quality, and satisfy water quality requirements of the Clean Water Act. These techniques consist of a public education and outreach program, public participation, illicit discharge detection and elimination, construction site runoff control, post-construction runoff control, and pollution prevention by using good housekeeping practices. UI received its second five-year permit in May of 2009.

What is Stormwater Runoff?

Stormwater runoff is rainfall or snowmelt that runs off permeable surfaces or impervious surfaces like roads, buildings, sidewalks or compacted ground surfaces. It can drain directly into streams, rivers, and lakes by traveling over ground or through storm drains. These drains, commonly called storm sewers, should not be confused with sanitary sewers that transport wastewater to a treatment plant before discharging to surface waters. Stormwater entering storm sewers does not receive any treatment before it flows to surface waters such as lakes and streams.

Why is Stormwater Runoff a Problem?

Storm water can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river or wetland. Anything that enters a storm sewer system is discharged untreated into the water bodies we use for swimming, fishing and providing drinking water.

Questions may be directed to Amy Myers at the Office of Sustainability 335-5517.

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NIH Guidelines Breeding Exemption

Effective January 19, 2011, the *NIH Guidelines* have been revised to exempt the breeding of transgenic/knockout rodents that may be housed under BL1 containment conditions with the exception of:

- Breeding experiments involving transgenic rodents that contain more than 50 percent of the genome of an exogenous eukaryotic virus from a single family, in order to prevent inadvertent reconstitution of an exogenous virus in the resultant transgenic rodent; and
- Breeding experiments in which the transgenic rodent's transgene is under the control of a gammaretroviral long terminal repeat (LTR), in order to address the small risk of recombination with endogenous retroviruses which could potentially result in mobilization of the transgene via a replication-competent mouse retrovirus.

The above two types of experiments must still be registered with, and eventually approved by, the Institutional Biosafety Committee (IBC) under Section III-E of the *NIH Guidelines*. Please be aware that this exemption only applies to breeding; **the initial production of transgenic/knockout rodents still requires registration with and approval from the IBC**.

For more information on recent revisions and a full copy of the *NIH Guidelines*, please visit the Office of Biotechnology Activities' website at *http://oba.od.nih.gov/rdna/nih_guidelines_oba.html*. Please contact Haley Sinn, Biological Safety Officer, at 335-9553 or *haley-williams@uiowa.edu* with any questions.

IATA Shipping Updates

The Dry Ice and Shipping Infectious Substances with or without Dry Ice ICON courses have been updated to reflect changes made in the 2011 IATA Dangerous Goods Regulations. Please review the course applicable to your shipping needs in order to ensure that you are aware of these updates.

EHS Customer Satisfaction Survey

EHS is conducting a customer satisfaction survey that is available until March 9th. You should have received an email request on February 23rd, and we would appreciate you taking the time to give us your perspectives on our programs and letting us know how well EHS programs meet your workplace safety needs. We appreciate any suggestions you have for areas where we could improve.

Great Moments in Radiation Safety History

Hans Geiger and Walther Muller invented the Geiger counter in 1928. Originally invented to detect radiation, as part of a research project, a Geiger detector consists of an enclosure containing two electrodes with a low pressure gas in between. A voltage is applied between the electrodes, such that when radiation passing through the detector ionizes the gas, an avalanche of electrons occurs. This signals the instrument to indicate that radiation is present.

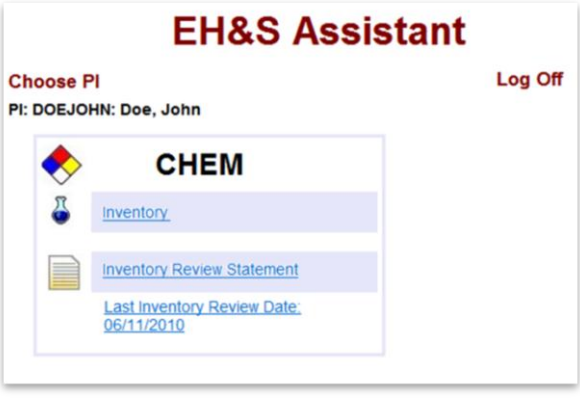
New Chemical Inventory System Now in Place

If you have attempted to access ChemTracker after February 28, 2011, you will have discovered that it is no longer available. As of March 1, 2011, EHS has placed all chemical inventories into the new EHS Assistant chemical inventory system. The new system can be accessed through the EHS web site by following these steps: 1. Select the yellow highlighted 'Labs' tab. 2. On the 'Labs' page, look under 'Resources' then click on the 'EHS Assistant Login Page' link. Immediately below this link, you will also find the link for the 'EHS Assistant: Chemical Inventory User Guide'. The guide also contains a list of FAQs.

Classroom training for the new inventory system was conducted in January and February. However, if you have questions about how to gain access to or use the system or if you find problems, please contact either Rachelle Justice (*rachelle-justice@uiowa.edu*, 353-4692) or Laurie Taylor (*laurie-taylor@uiowa.edu*, 335-8031).

Inventories from ChemTracker were transferred directly to EHS Assistant. However, please check to verify the chemicals in your inventory, as well as the other information in your account (i.e., room numbers, user names, etc.) to ensure all the information is correct.

The MSDS system, ChemQuik, is still currently available to all users. It can be found under the Quick Links section of the EHS website or *http://www.actiocms.com/chemquik/mainpage.cfm*.



Why Certain Solvents Should Not Be Stored In a Domestic Refrigerator or Freezer

Flash point is the temperature at which the liquid phase gives off enough vapor to flash when exposed to external ignition sources. Domestic refrigerators and freezers contain potential ignition sources such as light bulbs, switches, thermostats and motors. These components may initiate a fire or an explosion if flammable solvent vapors are present inside the refrigerator. In addition, extended power loss to refrigerators can lead to temperature increase within the refrigerator and thus an increase in vapor phase concentration from the stored flammable solvents.

Some domestic refrigerators or freezers might have been modified to remove spark sources. However, these refrigerators should not be considered as an acceptable alternative to certified flammable liquid refrigerators or freezers. Only explosion-safe, explosion proof, or certified flammable liquid refrigerators can be used to store flammable solvents. In other words, do not store the flammable liquids in a domestic refrigerator. Domestic refrigerators in each laboratory work area should be identified and labeled as "Do Not Store Flammables in This Refrigerator."

Flammable solvents include neat solvents and their aqueous solutions. For an example, aqueous ethanol (≥ 17% ethanol in water) is considered flammable because the flash point for this solution is less than 37.8°C (or 100°F). Similarly, certain combustible liquids (having flash point in the range 37.8°C - 60°C) can potentially initiate a fire or an explosion if stored in a domestic refrigerator and freezer. Flash points for commonly used laboratory solvents are identified in the table below. At a given refrigerator temperature, a low flash point solvent will have higher volatility and vapor phase concentration when compared to a high flash point solvent.

Flash Points for Commonly Used Laboratory Solvents

Solvent	FP, °C (°F)	Solvent	FP, °C (°F)	Solvent	FP, °C (°F)
Pentane	-49 (-56)	Ethyl acetate	-4 (25)	Pyridine	17 (63)
Diethyl ether	-45 (-49)	Heptane	-4 (25)	2-Butanol	26 (79)
Dimethyl ether	-41 (-42)	Methylene chloride	1.6 (35)	m- or p-Xylene	27 (81)
Petroleum ether (ligroine)	-30 (-22)	Toluene	4 (39)	Chlorobenzene	29 (84)
Methyl t-butyl ether	-28 (-18)	Acetonitrile	6 (43)	o-Xylene	32 (90)
Hexane	-22 (-8)	t-Butyl alcohol	11 (52)	Nitromethane	35 (95)
Tetrahydrofuran	-21 (-6)	Methanol	12 (54)	1-Butanol	35 (95)
Cyclohexane	-20 (-4)	2-Propanol	12 (54)	Acetic acid	39 (102)
Acetone	-18 (0)	1,4-Dioxane	12 (54)	Dimethylformamide (DMF)	58 (136)
Benzene	-11 (12)	Ethanol	13 (55)	Dimethyl sulfoxide (DMSO)	95 (203)
Triethylamine	-11 (12)	1,2-Dichloroethane	13 (55)	Chloroform	--
2-Butanone	-7 (19)	1-Propanol	15 (59)	Carbon tetrachloride	--

Please contact P. Subramanian (335-8299) or LuAnn Hiratzka (335-7964) at EHS if you have questions about this topic.

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EHS is Going Green

This will be the last edition of LABNEWS in paper form. After many years of distributing our publication through Campus Mail, we have decided to save a few trees and send it electronically using our new EHS listserv. If you are currently on our mailing list, you will be automatically subscribed to this listserv and should receive the July edition of LABNEWS electronically. If you are not on the mailing list and would like to be, please email *EHS-request@LIST.UIOWA.EDU*.

Battery Recycling and Disposal

Did you know that EHS recycles certain types of batteries? Batteries generally fall into two groups: non-hazardous (alkaline batteries) and hazardous (rechargeable batteries). Examples of rechargeable batteries include NiCad, lithium lead-acid, and nickel-metal hydride. EHS collects and recycles rechargeable batteries by sending them to recycling companies, such as Exide and Call2Recycle. If you have rechargeable batteries to be recycled, you are responsible for labeling them as waste and notifying EHS for collection.

The following link on our web site discusses batteries and other hazardous materials that EHS has responsibility for recycling: *https://research.uiowa.edu/ehs/files/documents/waste/universalwastemanagementproc.pdf*

Alkaline batteries are not hazardous and modern landfills can safely accommodate their disposal. The Johnson County Waste Reduction and Recycling Guide states that alkaline batteries may be thrown away with regular trash. A link to the guide can be found at: *http://www.icgov.org/site/CMSv2/file/solidWaste/wasteReductionGuide.pdf*

Further questions about batteries may be directed to Jim Pyrz at 335-4625 or *james-pyrz@uiowa.edu*.

Proper Disposal of Personal Protective Equipment

As a reminder, all personal protective equipment (PPE) must be disposed of in the red bag-lined biowaste containers regardless of whether they have been contaminated (i.e., contact with a hazardous chemical or biological agent). Custodians have recently found booties disposed of in the regular trash on the second floor of BSB, next to the vending area, and gloves in the regular trash within the laboratories. As a courtesy to custodians and other staff members who do not know the purpose for your PPE (e.g. to protect you or to protect your animals/research), please ensure proper disposal of used PPE in the biowaste containers.

Shipping Category A Infectious Substances

In January 2011, FedEx Express started requiring that shipper's declarations be prepared using one of the following methods: 1) FedEx approved vendor software application, 2) preapproved shipper proprietary software, or 3) FedEx Express Automated Shipping Solutions.

Saf-T-Pak Online Forms Maker has recently been accepted by FedEx Express for the creation of shipper's declarations and is available for use at no charge. To access the Saf-T-Pak Online Forms Maker, go to *www.saftpak.com.* On the left hand side of the home page is the Online Forms link; you will need to create a login name and password before accessing the Online Form Library Resource Center where the shipper's declaration is available.

If you have any questions regarding the Saf-T-Pak form please contact the vendor; for shipping infectious substances questions please contact Biosafety Staff at 335-8501.

Have You Been Offered the Hepatitis B Vaccination?

All staff considered at risk for bloodborne pathogen exposure (contact with human blood, human tissues, and/or human cells/cell lines) must be offered the Hepatitis B vaccination at no charge. A vaccination consent or declination form (available on EHS's website) must be completed by each staff member to meet OSHA requirements. It is critical that the employee correctly completes the form in order for it to be recorded at UEHC and uploaded within the HR System. **Employees MUST use their 8-digit University ID number on either form**; employee ID numbers and social security numbers are not acceptable.

If an employee has submitted a declination form and it has not been recorded within the HR BBP At-Risk report, the employee did not complete the form correctly. Exposure control officers or other administration staff should request that the employee **correctly** complete another form and submit this to UEHC. New consent and declination forms have been posted on EHS's website requesting the university ID number; please discard any old forms that you may have saved to your computer or printed as they are no longer acceptable.

Contact Haley Sinn, 335-9553, or Cait Ross, 353-5679, with any questions.

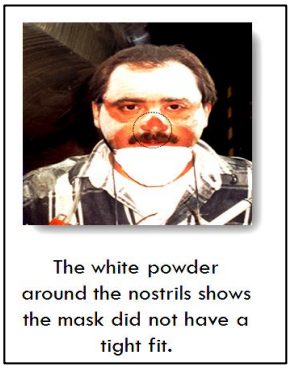
"Prudent Practices" Is Updated

Prudent Practices in the Laboratory: Handling and Management of Chemical Hazards (the Grey Book) was updated by National Research Council in April 2011. The electronic version is available to read at no charge at: *http://www.nap.edu/catalog.php?record_id=12654*. "Prudent Practices" is a consensus publication that discusses best practices for safely managing chemicals in laboratories and is referenced in OSHA 1910.1450, Occupational exposure to hazardous chemicals in laboratories.

Q&A on Dust Masks (N95/R95 Respirators)

N95/R95 respirators, commonly known as dust masks, are used to filter particulate material from the ambient air. Their use can be required by the supervisor, or voluntary in areas where there is not expected to be overexposure or the potential for overexposure to hazardous air contaminants.

1. **Do I need the respirator-use training before using a dust mask in the lab?**
   Yes. Training is required for all lab employees who use respirators.
2. **Can I use any kind of respirator for my work?**
   No. Respirators are selected on the basis of hazards to which an employee is exposed (i.e., particulates, vapors, infectious agents, animal dander, etc.). Dust masks should not be used to protect against solvent vapors.
3. **Can I wear a single strap dust mask?**
   No. Only NIOSH approved dust masks with double straps can be used in research laboratories for protecting the worker. Single strap dust masks and poorly fitted masks do not protect against dusts and aerosols.



4. **Can I share the N95 dust mask/respirator with colleagues in my laboratory?**
   No. Disposable respirators cannot be disinfected, and are therefore assigned to only one person.
5. **When do I need to obtain a medical evaluation and complete the "Respirator Fitness Medical Form" from UEHC or the Student Health Clinic?**
   You must complete the "Respirator Fitness Medical Form" and obtain a medical evaluation if your supervisor **requires** you to wear a respirator.
6. **Do I need to complete the medical questionnaire for voluntary dust mask/respirator use?**
   No. If respirator use is ***not*** required by your supervisor, do not complete the medical questionnaire.
7. What else is needed to wear a voluntary dust mask/respirator?
   A documented hazard assessment for respirator use is required. Request forms are available on the EHS web site.
8. **How often do I need respirator fit testing?**
   Annual fit testing is required if you are wearing a dust mask/respirator under a "required" respirator program. Fit testing is ***not*** required for voluntary use of respirators.
9. **How often do I clean and disinfect my N95 dust mask?**
   Never. N95 respirators are not manufactured in such a way that they can be cleaned, disinfected or repaired. Disposable respirators must be discarded if they are soiled, physically damaged, the straps lose elasticity or become brittle, or they reach the end of their service life.
10. **How long can I use a dust mask/respirator before I replace it?**
    Disposable respirators may be reused by the same worker as long as it functions properly and is stored in a clean and dry environment. Under certain work conditions, such as working with bioaerosols, pathogens, etc., disposable respirators should be replaced as frequently as possible and should not be stored for next day use.

The following documents and videos will be helpful for proper use and care of dust masks:
https://research.uiowa.edu/ehs/files/documents/occsafety/Respprotectionguides.pdf
https://research.uiowa.edu/ehs/files/documents/occsafety/20091216-respirator-1-english-high.wmv
https://research.uiowa.edu/ehs/files/documents/occsafety/20091216-respirator-2-english-high.wmv

Contact EHS at 335-8501 for additional information on training requirements.

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Annual Certification of Biosafety Cabinets

The Institutional Biosafety Committee (IBC) has discussed the need to annually certify biosafety cabinets (a.k.a. BSCs, tissue culture hoods) on campus. While annual certification is recommended in the *Biosafety in Microbiological and Biomedical Laboratories* (5th Edition, CDC/NIH) and the *NSF/ANS Standard 49 – Class II (Laminar Flow) Biosafety Cabinetry*, the IBC determined that best practice is to use a BSC that has been certified on an annual basis. For purposes of training students, to avoid "sharing" issues with multiple laboratories, and a general need to be cautious with organisms handled in the lab, the IBC established a policy requiring annual certification of all BSCs that are in use. The policy can be found at: https://research.uiowa.edu/ehs/files/documents/biosafety/BSCpolicy.pdf.

The University contract for BSC service is managed by Cait Ross, Associate Biosafety Officer. Contractors certifying BSCs are required to be NSF certified and to follow the NSF/ANSI 49 Standard. Please contact Cait (353-5679, cait-ross@uiowa.edu) for issues with BSCs and watch for her email arranging service for the month the BSC certification expires.

Fatal laboratory-acquired infection with an attenuated bacterium

In September 2009, the Chicago Department of Public Health was notified of a possible fatal laboratory-acquired infection with a pigmentation-negative (pgm-) attenuated *Yersinia pestis* strain (KIM D27). The patient was a researcher in a university laboratory and the cause of death was likely an unrecognized occupational exposure (route unknown) to KIM D27, which lead to septic shock. This attenuated strain has defects that result in its inability to acquire iron; this strain had not previously been associated with laboratory-acquired infections or human fatalities. A postmortem diagnosis of the patient revealed hereditary hemochromatosis; hemochromatosis is the leading cause of iron overload disease in which the patient absorbs extra amounts of iron from their diet. Ultimately, this iron overload may have provided the attenuated bacterium with sufficient iron to become virulent and result in this unexpected fatality. The full case report is available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6007a1.htm?s_cid=mm6007a1_e&source=govdelivery.

Researchers should always adhere to good laboratory practices and biosafety guidelines when working with live biological agents, including attenuated strains and viruses. Be aware of clinical symptoms of illness and always inform your personal physician of the agents you work with in the laboratory.

New Chemical Fume Hood Training Module

EHS has a new training module "Chemical Fume Hoods" – Course W485CH. We believe it is a good addition to our training collection. Many people have indicated they don't have a good understanding how a fume hood works, or the best way to use the hood in order to control exposure to hazardous materials.

This training is recommended initially and annually for individuals who handle chemicals in a research lab or other work areas and use a chemical fume hood to limit exposure to hazardous chemical vapors, gases, fumes, aerosols or other particles.

The course is accessible through the HR Self-Service web site under My Training / Available Online ICON Courses / Fume Hood Training.

Please contact Rachelle Justice (353-4692) or LuAnn Hiratzka (335-7964) with questions about fume hoods.

New EHS Student

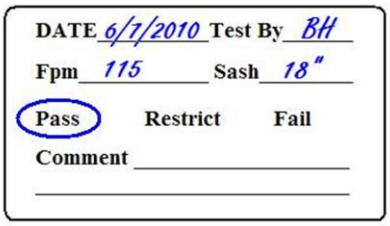
On May 16th, EHS welcomed Dumayi Gutierrez as a student technician in the Chemical Safety section. Dumayi is completing the Health Science track in Interdepartmental Studies at the University of Iowa. Her duties at EHS will focus primarily on fume hood performance testing. She can be reached at dumayi-gutierrez@uiowa.edu.

Annual Fume Hood Testing

EHS checks airflow performance for all fume hoods on campus on an annual basis. This summer Dumayi Gutierrez will visit each lab to check the fume hoods. Users are reminded to keep hoods clear of bottles and other items to facilitate these checks.

If your lab is locked, a note will be taped to the door asking you to call and schedule a check. Performance results are written on an EHS sticker on the front of the hood. If the hood fails or needs maintenance follow-up, EHS will make the initial referral to the FM Work Control Center. Follow-up checks will be done by EHS after maintenance work is complete.

Details regarding fume hood use and testing can be found in the Chemical Hygiene Plan, Sections 9.2 and 9.3; for questions, contact Rachelle Justice at 353-4692 or rachelle-justice@uiowa.edu.



Hot Time, Summer in the City (or Laboratory)

Now that summer is finally here, most of you have probably stashed your long sleeved shirts and corduroys in favor of shorts and T-shirts. EHS would like to take this opportunity to remind lab staff of the importance of continuing to wear appropriate attire whenever working in the lab. The following guidelines are intended to take the guesswork out of dressing for a day on the job:

- Open-toed shoes such as sandals or flip-flops should not be worn in research labs, as they leave the wearer more prone to physical or chemical foot injury.
- Short-sleeved shirts are fine, but a lab-coat with long sleeves should always be worn when working with hazardous chemicals, biological agents, or radioactive material in order to help prevent or minimize skin injury or contamination in the event of an accident.
- The use of the appropriate personal protective equipment (PPE) is mandatory. Your lab should have a hazard evaluation form which lists the different tasks within the lab and the required PPE for each. This may include lab coats, splash shields, nitrile gloves, goggles, etc. If you have any questions about the proper PPE, ask your lab manager or EHS.
- Summer is a good time to check the calibration and/or certification dates of your fume hoods, biosafety cabinets, Geiger counters, etc. to make sure they are current. Please contact EHS if any of this equipment is past due for testing.

Nationwide Recall of All Lots of Povidone Iodine Prep Pads

(Originally Published by Bruce McAvoy, UI Public Safety)

FOR IMMEDIATE RELEASE — March 15, 2011 —Hartland, Wisconsin, H&P industries, Inc., a manufacturer of over-the-counter products has initiated a voluntary product recall of ALL LOTS of POVIDONE PREP PADS manufactured by H&P Industries, Inc. but which are private labeled for many accounts. This recall has been initiated due to results of the FDA's ongoing investigation and sampling efforts, and H&P Industries, Inc. internal investigation.

The Povidone Iodine Prep Pads are non-sterile and contain some of the same raw material as the recalled Alcohol Prep pads, and were therefore investigated by FDA and by H&P Industries for potential contamination with objectionable organisms. However, analytical testing showed the presence of objectionable organisms, namely *Elizabethkingia meningoseptica*.

We are therefore taking immediate action to voluntarily recall the Povidone Iodine Prep Pads. Use of contaminated Povidone Prep Pads could lead to life-threatening infections, especially in at-risk populations, including neonates, immune suppressed patients, and surgical patients. Treatment options are limited for *Elizabethkingia meningoseptica* infections. To date we have not received any reports of adverse events.

Povidone Iodine Prep Pads are used to prevent infection in minor cuts, scrapes and burns and are labeled as an antiseptic for preparation of the skin prior to surgery. They were distributed nationwide to healthcare customers and are packaged in individual packets and sold in a box of 100 packets. ***The affected Povidone Iodine Prep Pads can be identified by the names listed below in their packaging:***

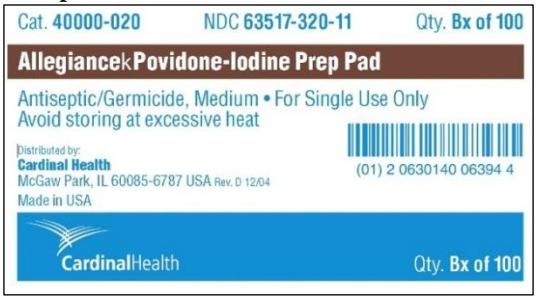
Cardinal Health	**Triad Plus**
Medical Specialties	**North Safety**
VHA	**Total Resources**
Triad	**Atwater Carey First Aid Kits**

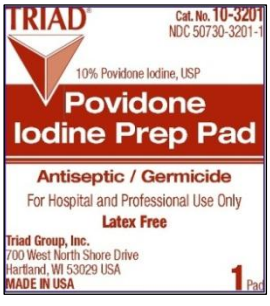
These products were distributed in the United States. Specific customers distributing the product and selling it at the wholesale and hospital level are being notified by certified mail with instructions on how to return the product. If a consumer has any of these types of products in their possession, they should not use the product and should return it to the place it was purchased for a full refund or call H&P Industries, Inc. Customer Service Monday through Friday between the hours of 8:30 a.m. and 4:00 p.m. Central Time: 262.538.2900.

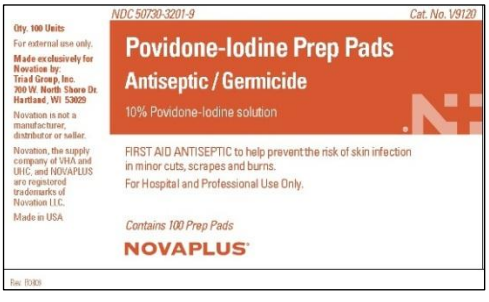
DO NOT RETURN THE PRODUCT ON YOUR OWN, simply call H&P Industries, Inc., Customer Service listed above and they will issue you a return authorization number and make all return arrangements.

Adverse reactions or quality problems experienced with the use of this product may be reported to the FDA's MedWatch Adverse Event Reporting program either online, by regular mail or by fax.

Examples:







ENVIRONMENTAL HEALTH & SAFETY

LABNEWS

PH: 335-8501 • research.uiowa.edu/ehs • FAX: 335-7564 • September 2011

Storage Reminders for Gas Cylinders

(Excerpts from EHS Compressed Gas Safety Course)

As with any hazardous material, do not store gas cylinders in public hallways or other unprotected areas. Compressed gas cylinders must be secured to a sturdy surface with a chain, strap, or bar at a point approximately 2/3 the height of the cylinder at all times. Store them in an upright position. Cylinders must be secured individually – that is, one restraint device per cylinder. If installation of wall chains or bench straps is needed, contact the Work Control Center at 335-5071.

Replace valve caps on cylinders when they are not in use. Label empty cylinders as "empty" and store separately from full cylinders. Never store empty cylinders in a hallway or other means of egress.

Cylinders should be protected from weather extremes, direct sunlight, and other heat sources -- storage temperatures should not exceed 100° F. Do not subject cylinders to temperatures below -20°F, unless they are designed for such temperatures. Cylinders stored outdoors should be protected from the ground to prevent bottom corrosion. They should also be protected from continuous dampness, salt or other corrosive chemicals or fumes.

Segregate cylinders according to hazard class while in use (and also in storage). At a minimum, oxidizers must be separated from flammable gases and empty cylinders should be isolated from filled cylinders. See information below for additional information.

Gases with Health Hazard Ratings of 3 or 4 (or a rating of 2 with no physiological warning properties) *MUST* be kept in a hood or other continuous mechanical ventilation.

- **Acutely toxic compressed gases** must be stored in an approved, designated area with special ventilation. Contact EHS for more information.

Flammable compressed gases *should be stored at least 20 feet from flammable liquids, sources of heat, and cylinders of oxygen or other oxidizers. Bond and ground such cylinders as well as lines and equipment.*

Inert compressed gases should be stored in well-ventilated areas because a leak in a closed space can displace oxygen and pose an asphyxiation hazard.

Nitrous oxide compressed gas cylinders and those containing oxygen *should be maintained at least 20 feet from flammable and combustible materials, including fuel-gas cylinders.*

Welcome Back Students!

PPE and Site Specific Training

EHS regularly reviews First Reports of Injury records to evaluate the types of incidents and injuries that occur. We have noticed that incidents and injuries frequently involve individuals who either are not wearing the proper PPE, don't understand how to use the PPE, or are not following accepted work practices. Recent incidents related to the use/non-use of PPE include: safety goggles, glasses or shields not being used, chemical splashes to the eyes, and improper practices when using liquid nitrogen. Additionally, we have noticed several incidents or injuries have involved students.

Extra attention is needed to ensure novice laboratory workers understand how to perform tasks safely. One method OSHA uses to decide if PPE training was adequate is through observation and by asking individuals questions about the PPE they are wearing. Supervisors are responsible for making sure training for work-specific tasks is adequate. Always ensure that less experienced lab personnel have been provided any additional safety information that may be needed regarding **all** lab procedures.

Use of liquid nitrogen is so common that it is easy to forget how hazardous it can be. Please take time to review EHS's guide on cryogenic liquid safety which includes PPE guidance.

Student Injured in Lab Incident

A student at another university was injured recently when a beaker exploded in her hand during an experiment. A chemical reaction caused the explosion, and the student received cuts on her face and burns on her hands. She used only a small amount of the chemical, but it is very water reactive and releases toxic gas on contact with water. This is a good reminder to educate yourselves regarding the hazards of the materials you work with and to review any necessary precautions *before* beginning work. Reactive materials can lead to pressure changes inside labware containers. This can result in explosions or implosions. Be sure to determine in advance if you have the correct eye, face, and skin protection. Use the fume hood and position the hood sash as low as possible so it can act as an additional protective barrier between you and the experimental apparatus. If you would like to discuss the safety hazards of your experiment and measures to protect yourself, please contact LuAnn Hiratzka at 335-7964.

Keep Needles Out of Radioactive Dry Waste!

Part of the disposal process for radioactive dry waste involves sorting through the contents to confirm there are no items present that do not belong. Even though the appropriate tool was being used to sort the waste, an EHS staff was stuck by a needle. The proper way to dispose of needles is in a sharps container; **never place sharps in a radioactive dry waste container**. If you have radioactive sharps, collect them in a sharps container separately from non-radioactive sharps. Attach a radioactive waste tag to the sharps container and notify EHS for pickup. For questions please contact Jim Pyrz at james-pyrz@uiowa.edu or 335-4625.

Requirements for New Radioactive Material Users

Just a reminder that all new staff who will be working with radioactive material (RAM) need to complete Basic Radiation Safety Training prior to being authorized to work with RAM. To complete this training, go to the HR-Self Service site at https://login.uiowa.edu/uip/login.page?service=https://hris.uiowa.edu/portal/ and select **My Training** under **Learning and Development**. Select **Available Online Icon Courses** and scroll down to select **'Radiation Safety – Basic (Course # W002RD).** Click on **Enroll in this ICON Course**. Review the slides and complete the exam. Your exam will automatically be graded. After passing the course, the date of training will be added to our records.

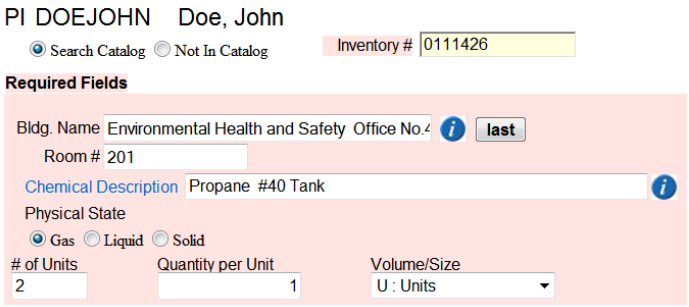
Some researchers will also need to wear radiation dosimeters while working with radioactive materials. Dosimeters are ***required*** to be worn when routinely working with the following quantities of radioactive material: I-131, 2.0 mCi; I-125, 5.0 mCi; P-32, 1.0 mCi; Gamma microspheres, 0.5 mCi. Contact EHS at 335-8518 for more information on obtaining and wearing dosimeters.

New Chemical Waste Pickup Form Online

We would like to introduce our new online submittal form for Chemical Waste pickups. You no longer need to call or complete a paper request form. Go to our website: https://research.uiowa.edu/ehs/ and look under Quick Links/ Waste Pickup Info/ Online Request for Pickup of Chemical Waste. Complete all information and click **submit**. For questions about this form, please contact Jim Pyrz at 335-4625.

Inventory Information Needed For Compressed Gas Cylinders

EHS reminds University faculty and staff of the requirement to update their chemical inventories to reflect the actual quantity of material they have on hand. In the Volume/Size field, any non-additive value (e.g., Units, Cylinders, Items, etc.) must be changed because of ***Department of Homeland Security (DHS) reporting requirements***. Use the units listed in the drop down list. This is especially important for any ***gas cylinders*** in use or in storage. ***Please update your gas cylinder inventory using units of cubic feet, gallons, or liters.*** Some handy conversions are: 1 cubic foot = 7.481 gallons; 1 liter = 0.264 gallons.



There are several ways to determine the volume of gas in your compressed gas cylinder:

1. If you have purchased a gas cylinder through UI General Stores, contact them with the invoice number of your purchase. If you do not have this information, tell them the "size" of the cylinder and type of gas it contains. They can then tell you how many gallons or cubic feet of gas are in the cylinder.
2. You can look on the cylinder itself. Some cylinders have labels near the neck of the cylinder indicating how many liters the cylinder contains.
3. You can calculate the volume of gas in the cylinder using the method shown in the link below.

Volume of Gas in Cylinder *
(* From Scott Specialty Gases
http://www.scottecatalog.com/scotttec.nsf/74923c9ec562a6fb85256825006eb87d/79aab9774bd29d3a8525699f0050436a**)**.

If you have any questions, please contact Laurie Taylor at 335-8031 or laurie-taylor@uiowa.edu.

EHS Holiday Pickup Schedule

	Hazardous
Monday (9/5)	**No Pickups (University Holiday)**
Tuesday (9/6)	IREH, MTF, PHAR, PRL, JPP, RCP, JCP, GH (Hospital nursing units/patient areas)
Wednesday (9/7)	BB, BSB, VAMC, MERF & all other areas CB, IATL, SC, WP, OH
Thursday (9/8)	DSB, EMRB, ML, MRC, MRF, BT, RCP (Hospital lab area & other hospital areas)
Friday (9/9)	No Pickups

Radioactive waste pickups will be Wednesday, 9/7.