



# Safety BEACON

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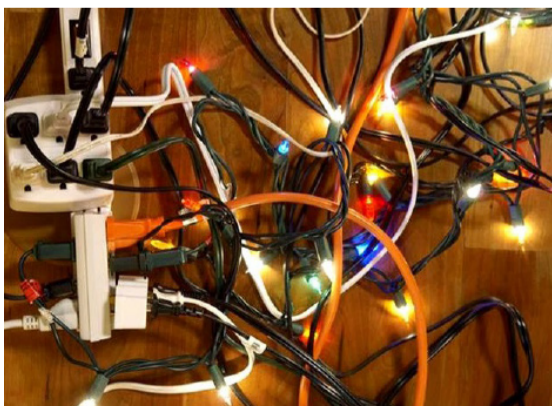
## Fire Safety

*Stay fire safe during the holiday and winter season!*

As the temperatures begin to drop and the holidays approach it is important to remain conscious of all the potential fire hazards associated with holiday decorations and heating appliances.

Millions of Americans decorate their homes every holiday season. Christmas trees can pose a serious fire hazard if not properly maintained. Always keep your tree watered to prevent it from drying out. On average 1 out of every 31 Christmas tree fires results in the loss of a human life. Place your tree so that it is at least three feet away from any heat source. This will help prevent your tree from drying out as well as catching fire. When hanging Christmas lights always read the manufacturer's instructions to ensure that you do not connect more strands than recommended. Many choose to light candles in their homes around the holidays. It's important to keep lit candles away from combustibles and to never leave them unattended. Two out of five home decoration fires are started by candles and the top three days for home fires caused by candles are Christmas Eve, Christmas Day and New Year's Day. Losing a home anytime of the year is difficult, but losing all of your valuables and family treasures during the holidays can be extremely difficult.

The National Fire Protection Association (NFPA) reports that half of all heating related fires occur during the months of December, January and February. Never use a gas range or an oven as a supplemental heat source. Not only is it a fire hazard, it can also be a source of toxic fumes. If you use an electric heater, be sure not to overload the circuit. Only use extension cords that are the same size or larger than the appliance's electrical cord. If you use a fireplace do not use flammable liquids to start or accelerate the fire. Keep a glass or metal screen in front of the fireplace opening to prevent embers or sparks from jumping out. Also keep flammable materials away from the fireplace and mantel; a spark from the fireplace can easily ignite these materials. Make sure that your fireplace/fire is out before you go to sleep and NEVER close your damper with hot ashes in the fireplace. Finally, have your chimney inspected annually and cleaned if necessary.



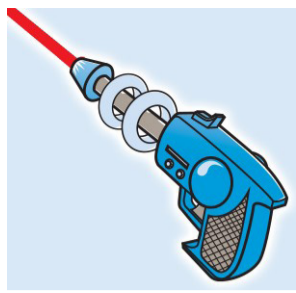
Look at this mess! Tripping over wires is a huge fire hazard



Did someone say circuit overload?



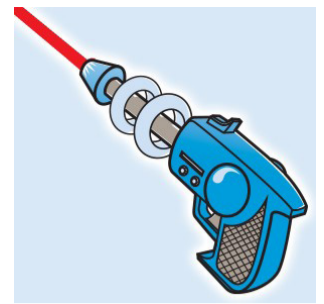
Christmas light dangers are very real!



## Christmas Toys

*Think twice when buying a laser toy as a holiday gift!*

*The following is an excerpt from a Consumer Update from the  
US Food and Drug Administration (FDA):*



Many a kid (and parent) who has seen Luke Skywalker battle Darth Vader with a lightsaber thinks lasers are cool. What they may not know is this: When operated unsafely, or without certain controls, the highly-concentrated light from lasers—even those in toys—can be dangerous, causing serious eye injuries and even blindness. And not just to the person using a laser, but to anyone within range of the laser beam. The Food and Drug Administration (FDA) is particularly concerned about this potential danger to children and those around them. According to Dan Hewett, health promotion officer at FDA's Center for Devices and Radiological Health, "A beam shone directly into a person's eye can injure it in an instant, especially if the laser is a powerful one."

However, laser injuries usually don't hurt, and vision can deteriorate slowly over time. Eye injuries caused by laser light may go unnoticed, for days and even weeks, and could be permanent, he says.

Some examples of laser toys are:

- lasers mounted on toy guns that can be used for "aiming;"
- spinning tops that project laser beams while they spin;
- hand-held lasers used during play as "lightsabers;" and
- lasers intended for entertainment that create optical effects in an open room.

### **FDA Regulates Lasers**

A laser creates a powerful, targeted beam of electromagnetic radiation that is used in many products, from music players and printers to eye-surgery tools. FDA regulates all these products, including laser toys. Toys with lasers are of particular interest to the FDA because it's often children who are injured by these products, says Hewett. He notes that because advertisers promote them as playthings, parents and kids alike may believe they're safe to use. "For toys to be considered minimal risk, we recommend that the levels of radiation and light not exceed the limits of Class 1, which is the lowest level in regulated products," Hewett says. Lasers used for industrial and other purposes often require higher radiation levels, he explains. But in toys, those levels are unnecessary and potentially dangerous.

In recent years, Hewett says, lasers have increased markedly in power and have gone way down in price. And while adults may buy a laser pointer for use in work, kids often buy them for amusement. "Low-cost, compact laser pointers used to be quite low in power," Hewett says; but, in the last 10 years, many laser pointers have increased in power 10-fold and more. The fact that lasers can be dangerous may not be evident, particularly to the children who use them as toys, or to the adults who supervise them.

### **Tips to Keep in Mind**

- Never aim or shine a laser directly at anyone, including animals. The light energy from a laser aimed into the eye can be hazardous, perhaps even more than staring directly into the sun.
- Remember that the startling effect of a bright beam of light can cause serious accidents when aimed at a driver in a car or otherwise negatively affect someone who is engaged in other activity (such as playing sports).
- Look for a statement that it complies with 21 CFR (the Code of Federal Regulations) Subchapter J on the label.
- "If you buy a laser toy or pointer and you don't see this information in the labeling, it's best not to make any assumptions about its safety," Hewett says.

# Carbon Monoxide

## *The Silent Menace*

Winter means we spend more time indoors. Being in close quarters, we expect to see an increase in influenza cases. But is that headache, nausea and lethargy caused by the flu bug or by something more deadly?

Carbon monoxide is an odorless, colorless gas that naturally occurs when we burn fuel for things like heating, cooking, or running automobiles. When properly ventilated, carbon monoxide is not dangerous to humans, but when it is allowed to concentrate, inhaling it produces symptoms similar to the flu. Increased exposure may lead to unconsciousness and eventually death.

Tragically, several people in New Castle County died last March when a faulty boiler exhaust vent allowed carbon monoxide to infiltrate their apartments.

### **There are several lines of defense against carbon monoxide poisoning:**

- The first line of defense against carbon monoxide poisoning is installing and maintaining carbon monoxide detectors on all levels of your house or apartment.
- Make sure at least one detector is located outside bedrooms and that it is loud enough to awaken anyone who is asleep.
- Make sure chimneys and flues are not blocked with debris.
- Have your heaters checked regularly: a small crack in the furnace can allow carbon monoxide to enter your house.
- Do not run your car engine inside a garage.
- NEVER use a kerosene heater or charcoal grill inside. If you lose power during a storm and use an electrical generator, place the generator outside and run power cords into the house through a window.
- And NEVER use a gas oven or burners as supplemental heat.

If you suspect you are being exposed to carbon monoxide, evacuate everyone from the building immediately and then call 9-1-1. Do not attempt to fix the problem yourself as carbon monoxide poisoning can affect judgement and make it difficult to perform even simple tasks.

## Signs of carbon monoxide poisoning



# BioRAFT is Here!

*EHS has a new lab management and training program.*

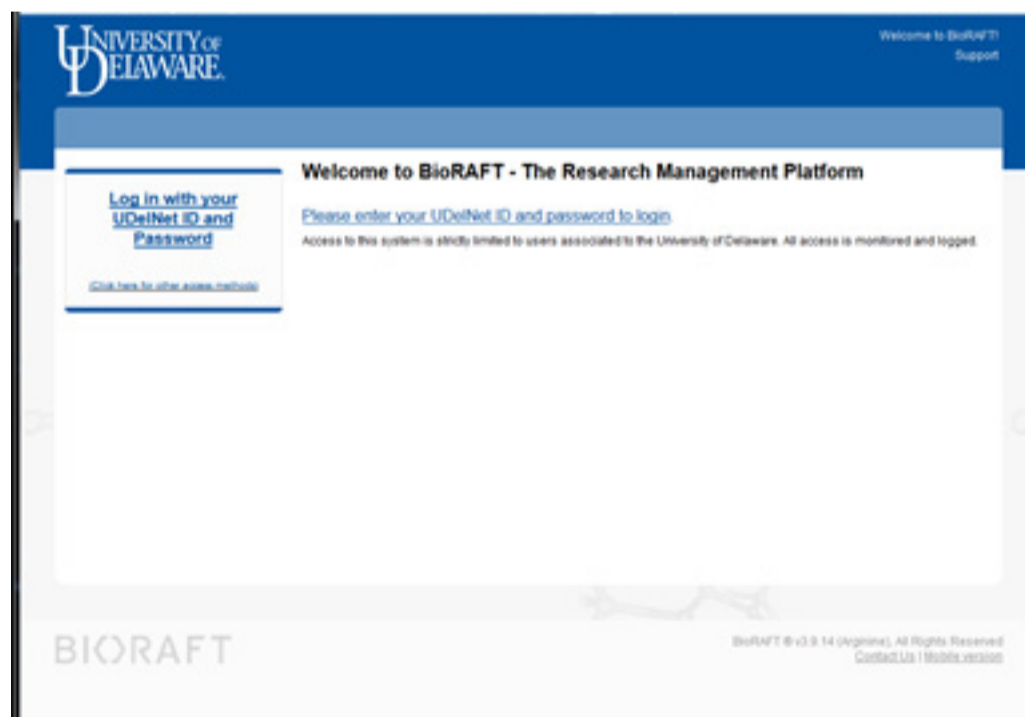
EHS is happy to announce that the new lab management program, BioRAFT, is now in operation!

This will be taking the place of EHS Assistant for equipment management, inspections, and training management, including online training courses. Access to the system is through the CAS logon, so anyone who has a UDeNet ID can access the system.

We are asking the Principal Investigators (PIs) to go online and set up their labs in the system. Upon login, they will be directed through a setup wizard. Most labs have taken about 15 minutes to go through this process. Once this is completed, they will be prompted on an annual basis to review and update their records. If the PI would prefer, they may delegate a Compliance Liaison(s) within their lab who would then have access to set up the lab records, add workers to their files, respond to outstanding lab inspections, and monitor the training status for their lab. All EHS lab inspections are now being completed in BioRAFT.

Trainings are being moved into BioRAFT. During the transition period, online trainings will be directed into either BioRAFT or EHS Assistant depending on whether they have been moved yet. By Spring semester all online trainings will be completed in BioRAFT. Historical training data is also being moved over to ensure students and staff get credit for courses they've already completed. Until this process is completed, the automatic notifications for training requirements will not be turned on in the new system. Registration for live trainings offered through the EHS office for 2017 courses will be completed in BioRAFT. As long as someone has a UDeNet ID they can log into BioRAFT to sign up for a training course or take the courses online.

We look forward to the improved capabilities of BioRAFT. If you have any questions regarding how to use BioRAFT, please feel free to contact us at 302-831-8475.



# Chemical Waste

## The Do's and Dont's

With the Holiday break fast approaching many laboratories are cleaning house so they can come back to a clean lab and fresh waste bottles.

When cleaning any lab it is important to keep in mind some safety aspects. For example, legible labels. It is much easier for Environmental Health and Safety (EHS) and much less expensive to dispose of a chemical when we know what we're working with. On average it can cost twice as much to dispose of an unknown chemical than a known chemical, plus there are the expenses of hiring trained personnel to handle the increased hazards. Thus, whenever possible label chemical waste containers with a secure legible tag. Furthermore make sure the labels on reagent bottles are still legible and not falling off.

Now that your lab is cleaned out you can perform a proper chemical inventory and make sure everything is stored correctly. When storing chemicals in a lab it is important to remember what hazards are compatible with each other. The most common and familiar incompatible mixture is acids and bases, but how many other incompatible mixtures are you familiar with? Are you familiar with organic acids and inorganic acids not being stored together, or corrosives with flammables/combustibles? Also try to avoid storing oxidizers with flammables, combustibles, organic materials, and reducing agents. When storing peroxide formers such as THF or ethyl ether follow the manufacturer's instructions, protect them from direct light, and do not store below the freezing temperature of the compound.

Keep these tips in mind while cleaning your laboratory and you'll be sure to be accident free.

Properly labeled chemicals



Good Waste Label

CHEMICAL / HAZARDOUS WASTE FOR DISPOSAL

Lab Group/Department: EHS/waste here's

Contact Person: waste master Mia Date: 12/25/16

Site: Secret waste facility Room #: 007

Telephone #: 302-831-8475

Circle the appropriate waste stream for this container:  
 Acid  Aqueous  Caustic  Reagent  Solvent

Lab Trash Other: \_\_\_\_\_

CHEMICAL	QUANTITY
<small>List all chemicals, including water. Use only common chemical names. No formulas.</small>	<small>% of total or actual volume</small>
Acetone	50%
Toluene	15%
Acrylonitrile	15%
ethanol	5%
water	15%

For Hazard Communication: CHECK ALL THAT APPLY

Flammable  Corrosive  Poison

Oxidizer  Reactive  Carcinogen

I certify that the above information is correct. I understand that there are penalties under law for false certification of hazardous waste.

Request a waste pick-up at:  
<http://www.udel.edu/ehs/waste/chemical-waste-pick-up.html>  
 or 831-8475

SEE REVERSE SIDE FOR DIRECTIONS

Date moved to Central Accumulation: 12/27/16

Bad Waste Label

CHEMICAL / HAZARDOUS WASTE FOR DISPOSAL

Lab Group/Department: Chemistry ? maybe

Contact Person: EHS Date: yesterday

Site: \_\_\_\_\_ Room #: 5

Telephone #: \_\_\_\_\_

Circle the appropriate waste stream for this container:  
 Acid  Aqueous  Caustic  Reagent  Solvent

Lab Trash Other: \_\_\_\_\_

CHEMICAL	QUANTITY
<small>List all chemicals, including water. Use only common chemical names. No formulas.</small>	<small>% of total or actual volume</small>
Acetic HCL pH = 14	

For Hazard Communication: CHECK ALL THAT APPLY

Flammable  Corrosive  Poison

Oxidizer  Reactive  Carcinogen

I certify that the above information is correct. I understand that there are penalties under law for false certification of hazardous waste.

Request a waste pick-up at:  
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 or 831-8475

SEE REVERSE SIDE FOR DIRECTIONS

Date moved to Central Accumulation: \_\_\_\_\_

Improperly labeled and stored chemicals



## Look Who Got Promotions!

*Congratulations are in order!*

We are pleased to announce that Brian Miani and Chris Niles have both been promoted!

Brian Miani was recently promoted to Assistant Chemical Hygiene Officer. Brian leads the Chemical Waste Program here on campus. Brian's program focuses on waste disposal, hazardous waste shipments and laboratory safety.

Chris Niles has been promoted to Environmental Health and Chemical Specialist. Chris previously served as the Senior Technician for the Chemical Waste Disposal Program. Chris will take on the responsibilities of chemical waste shipments, chemical clean outs, and will continue to provide the campus community excellent service for the chemical waste and laboratory safety programs.

Congratulations to Brian and Chris! Thank you for your service ensuring chemical waste compliance and laboratory safety within the UD campus community.



Brian Miani



Chris Niles

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## EHS would like to hear from you!

We encourage all members of the UD community to submit safety improvement ideas on campus.

You may submit ideas that impact your personal safety here on campus or the safety of the greater community.

Your participation will help raise safety awareness in our community!

Please submit your safety concerns/ideas via email to [dehsafety@udel.edu](mailto:dehsafety@udel.edu).

