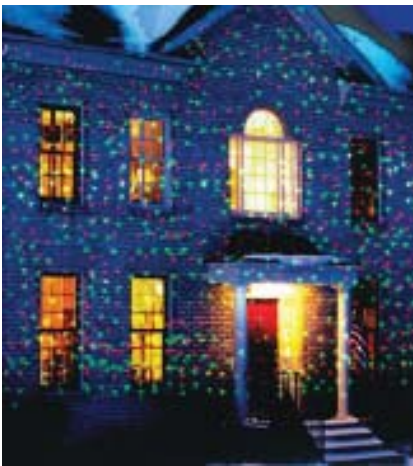


Environmental Health & Safety

Safety BEACON

www.udel.edu/ehs
302-831-8475

LASER HOLIDAY LIGHT DISPLAYS COOL CONCEPT, DANGEROUS CIRCUMSTANCE



With the holiday season upon us, the Federal Aviation Administration (FAA) reminds us to make sure our laser-light displays are aimed at our houses -- and not into the sky. The agency receives reports each year from pilots who are distracted or temporarily blinded by residential laser-light displays. This creates a serious safety risk to pilots and their passengers flying overhead.

People may not realize that systems they set up to spread holiday cheer can pose a potential hazard to pilots flying overhead. So when installing a holiday laser-light projection system, please make sure the lights are hitting the house and not shining up into the sky. It may not look like the lights go much farther than your house, but the extremely concentrated beams of laser lights actually reach much further than most people think.



A safe alternative to laser lights are projection lights that use LED light instead of a laser light. Often LED holiday lights are mislabeled as "laser" lights so you need to check the package to be sure. If they are actually laser lights, the package will be marked as shown in the picture. LED projector lights will not have that package marking. LED projection lights are safer because LED light cannot travel as far as laser light and strike pilots or aircraft.

Excerpts from FAA News & Update website <https://www.faa.gov/news/updates/?newsId=94787>

IT'S COLD AND FLU SEASON!

HOW TO KEEP YOUR GERMS TO YOURSELF

According to the Centers for Disease Control and Prevention, 3 to 11% of the U.S. population catches the flu annually. The flu season in the U.S. typically ranges from November to April.

Here are some tips to help you avoid colds and the flu:

- Clean and wipe down shared surfaces such as countertops, keyboards and phones
- Avoid touching your mouth, nose and eyes, and wash hands thoroughly and often
- Get a flu shot if possible (it is most important for children and the elderly)
- Exercise moderately, eat a balanced diet and take vitamin supplements to strengthen your immune system
- Drink plenty of water to stay hydrated and get plenty of rest.

Flu Symptoms:

- High fever 102-104 degrees Fahrenheit
- Headache, muscle aches, extreme fatigue
- Dry cough and sore throat
- Runny or stuffy nose
- Nausea, vomiting and diarrhea

Cold Symptoms:

- Sore throat
- Cough, chest discomfort
- Mild fatigue
- Fever and headache are rare
- Runny nose



Stop the Spread of Germs

Germs are spread in respiratory droplets caused by coughing and sneezing. They usually spread from person to person, though sometimes people can become infected by touching something contaminated by germs. Most healthy adults may be able to infect others beginning one day before symptoms develop and up to five days after becoming sick. To prevent the spread of germs, cover your nose and mouth when you sneeze or cough. Wash your hands frequently. Any kind of soap is effective in removing germs if you vigorously rub your hands together for at least 30 seconds.

To work or not to work

Cold and flu are the most common contagious diseases in the workplace. But should you go to work sick or stay home? The ultimate decision rests with the individual worker. The University of Delaware expects workers to use common sense and stay home when they are very sick. Health experts and HR professionals say personal judgment and common sense should be your guide. You should stay home if you have a fever because you are probably the most contagious at that time, or if you cannot control your sneezing and coughing. When in doubt, call your physician. If you decide to work and treat your symptoms with over-the-counter medications, check the label and ingredients, and talk to your pharmacist. Some cold and flu medicines (with antihistamines) can make you drowsy, and that can be dangerous when you drive a vehicle or work around any kind of machinery. The ultimate decision rests with the individual worker.

For more information on protecting yourself during cold and flu season and preventing the seasonal flu, visit <https://www.cdc.gov/flu/prevent/index.html>



Heat sources in a Biosafety Cabinet Compromise Experimental and User Protection



Keeping a contamination free environment in the laboratory has commonly been achieved by one of two ways:

1. Flame
2. Biosafety Cabinet (BSC)

It has been frequently observed that the two practices have been combined, where a heat source has been used within the BSC.

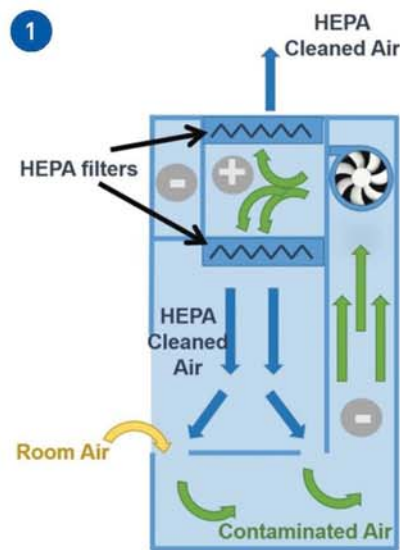
Also, it has been said that this practice could lead to a loss of BSC Containment, as flames require flammable gasses and cause hot air to rise.

We decided to put these practices to the test!

Several heat sources were evaluated in two sizes of BSC, using smoke for airflow visualization, particle counting for air cleanliness, and aerosol microbiological testing to show containment.

FIGURE 1. Sideview diagram of a Class II Type A2 BSC.

FIGURE 2. Heat Sterilizers. From left to right, the Bacti-Cinerator, Spirit Lamp, Standard Bunsen Burner, and High Heat Bunsen Burner.



Ultimately, it was shown that large flamed burners were found to have the most detrimental effects on the ability of the BSC to maintain containment, especially in the center of the work area, while the smaller heat sources were variable.

As a result, due to the variable outcome from location to location, and between burner types, it has been concluded that using a heat source within a BSC cannot be recommended!



Scan me


For more biosafety cabinet mythbusters, scan the QR code above!

WEBFORM UPDATES

CALLING ALL rDNA USERS

EHS now has a webform version of the rDNA Registration Form. You may use this or the most recent version of the PDF and/or Word documents are available on the EHS website.

Check it out: https://udapps.nss.udel.edu/webforms/embtform?wf_id=1238&wf_ty=blank



RECOMBINANT DNA REGISTRATION

Menu Help Logout

Directions: Please complete this form to register recombinant DNA research with the University Biosafety Committee (UBC) as required by the most current "Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules" (rDNA Guidelines) and the University Biosafety Manual.

Submit a separate form for each project. A copy of the current guidelines is available on the EHS website. If you have any questions, contact the Biosafety Officer at (302) 831-3475.

Symbol key: ● required information, ▲ error

Form Originator

Originated by: Ferguson Michele Leigh (700502525)
Environmental Health & Safety (21430)
mlf@ehs.udel.edu
302-831-4300

Principal Investigator

Same as Originator

Name of Principal Investigator:

Department:

UD email:
(use format: ssa@udel.edu)

Phone:
(use format: xxx-xxx-xxxx)

Research information

Does the project involve large scale recombinant DNA?

Project title:

Proposed start date for research:
(use format: mm/dd/yyyy)

Labs to be used for work

Provide at least one laboratory location.

Building	Room	Action
1. <input type="text"/>	<input type="text"/>	<input type="button" value="Save"/>

List of individuals participating in work

List all participants in project.

Name	Title	Email	Action
1. <input type="text"/> <input type="button" value="Q"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Save"/>

ICE MELT SALT AND OUR ENVIRONMENT

HOLD THE SALT PLEASE!

We know we need to limit the salt in our food to keep our bodies healthy, but did you know we also need to limit the salt on our driveways, too?

Many of us use deicers like Ice Melt (calcium chloride and magnesium chloride) or Rock Salt to keep our driveways and sidewalks ice-free during and after winter storms. Deicers work because they decrease the temperature at which water freezes thus turning ice back into water which can drain away.

It is human nature to assume that if a little deicer removes ice, using more will make ice melt even faster. Unfortunately, this is not true. Putting more salt than needed on driveways and sidewalks not only wastes money, but can also damage concrete and asphalt surfaces, kill your lawn and garden and irritate your pet's feet. Just as importantly, that excess salt eventually makes its way to our lakes and streams, killing aquatic plants and animals and polluting our drinking water.

Follow these tips to minimize your salt use this winter:

1. Shovel the snow early and often. If the temperature drops after a snowstorm, the snow can turn icy and be harder to remove.
2. The more scraping and removal of ice that you can do, the less deicer you will need to use. Deicers work best on a thin layer of ice.
3. After you remove all of the snow and ice, sprinkle salt sparingly. A good rule of thumb is to apply a handful of deicer for every square yard of surface being treated.
4. As the sun comes out, temperature rises, causing the deicer to make a slushy water/ice mixture. Remove this before the temperature drops again and you should have an ice-free surface until the next storm.



Too much ice melt!



Just the right amount of ice melt

CHEMICAL HYGIENE PLAN

WHAT IS OUR "CHP"?

Have you ever wondered where to seek guidance for working safely in a laboratory at the University of Delaware? Look no further than the Chemical Hygiene Plan (CHP). The CHP is required by OSHA Laboratory Standard 29 CFR 1910.145, and it is required to cover:

1. Safe work practices for all research and teaching facilities and operations.
2. Procedures and controls to maintain exposures below the established exposure limits.
3. Provisions for training, medical consultation, hazard identification, respirator use, and record keeping.
4. There is also a requirement for researchers to receive task and chemical-specific training. The training covered in the CHP is generalized and provides the foundation for the training provided by your faculty member or supervisor.

The University of Delaware's Chemical Hygiene Plan contains the following sections:

1. Purpose, Scope & Responsibilities
2. General Safety Guidelines
3. Exposure Control Methods
4. Engineering Controls and Laboratory Ventilation Program
5. Employee Training Program
6. Operations Requiring Prior Approval
7. Highly Toxic, Carcinogen, Reproductive Toxin Permit Process
8. Medical Consultation
9. Emergency Response
10. Chemical Waste Management Guidelines for Handling and Disposal of Chemical Waste
11. Chemical Spills
12. Injury, Illness, Personal Contamination, Minor First Aid
13. Transporting Hazardous Materials
14. Laboratory and Laboratory Equipment Decontamination, Close Out, and Decommissioning Procedures
15. Special Precautions for Working with Compressed Gases
16. Shipping Research Samples, Products and Chemicals
17. And other resources including Agreement of Medical Consultant, Chemicals Requiring Special Handling Procedures, and the Chemical Hygiene Compliance Policy



DEPARTMENT OF ENVIRONMENTAL HEALTH & SAFETY

CHEMICAL HYGIENE PLAN



The Chemical Hygiene Plan can be found on the EHS website and by opening this QR code through your smartphone.

The CHP even makes an appearance during the EHS laboratory inspections as one of the findings: "Is the lab aware of the Chemical Hygiene Plan and how to access it?" The CHP is a resource for all laboratory users, take time to review it at your next group meeting, and if you have any questions or concerns, do not hesitate to reach out to EHS. We are here to help!

FIRE SAFETY

PUT A FREEZE ON WINTER HOLIDAY FIRES

Decorating your home for the holidays can be fun and memorable, but holiday decorations can increase your risk for a home fire.

Below are some tips to keep you fire safe this winter season.

- More than half of home decoration fires in December are started by candles. Keep candles at least 12 inches away from anything that burns. Think about using battery operated candles instead.
- Although Christmas tree fires are not common, when they do occur, they are dangerous. Keep your tree watered and away from heat sources.
- When using holiday lights be sure to follow the manufacturer's instructions for the maximum allowable strands to be connected.
- Keep combustibles at least 3 feet away from space heaters. This includes bedding, clothing, curtains and Christmas trees.
- If using a fireplace to heat your home ensure that your chimney has been inspected and/or cleaned.

As you deck the halls this season, be fire smart!



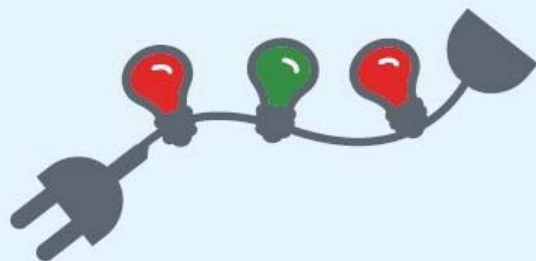
More than 1/3
of home decoration
fires are started by
candles.



Make sure your tree is
at least 3 feet away from
heat sources like fireplaces,
radiators and space heaters.



A heat source
too close to the
Christmas tree
causes **1 in every 4**
winter fires.



Read manufacturer's
instructions for the
number of light strands
to connect.

LITHIUM ION FIRE AT OKLAHOMA UNIVERSITY RESIDENCE HALL

PRACTICE CARE WHEN CHARGING ELECTRONIC DEVICES

Early Friday Morning (2am) on December 13, 2019, the residents living in an Oklahoma University Residence Hall were awakened to fire alarms sounding. Most were sound asleep at the time and initially thought it was a false alarm. Quickly through the influx of social media messages and the sound of those realizing it was an active fire banging on resident room doors, shouting “you need to evacuate”, it was quickly realized that this was a true emergency.

During this particular fire emergency, a charging cellular telephone caught fire near the resident’s bed where the occupant was sleeping. The residence room was thankfully protected by quick response sprinklers which extinguished the fire and likely saved the occupant from serious injury or worse. “In this case, the fire that started was right next to the bed. “There were actually elements of the bed, including the mattress and sheet and coverings, that caught fire, so in this case, the fire sprinkler activating and putting the fire out actually saved the student’s life,” OU Fire Marshal Justin Daniels said. The fire remains under investigation and more details may be released as to the reason for the cell phone battery catching fire.

Just like OU Residence Halls, our residence halls at UD are fully sprinkler protected and activate building wide fire alarms while notifying UDPD of the fire. There are common causes for Lithium Ion powered devices catching fire; typically it occurs during battery charging.

The following measures should be considered to prevent a fire during charging of your device:

1. Only use UL listed batteries and charging cables; knock-off items are cheap and not regulated.
2. Keep the device on a non-combustible surface while charging.
3. Avoid overcharging. Once the device is charged, remove it from charger. Trickle charging may actually reduce battery life.
4. Avoid charging unattended. If the device is fully charged before sleeping, unplug it until next morning.
5. Keep the device from overheating while charging by keeping it free from bedding, paper and other materials that may trap heat while charging.
6. Don’t expose the device to extreme cold or hot temperatures. Keep it out of the sun and out of the freezer.
7. Most LI batteries function effectively for 2-years and then diminish. If battery change out is needed, it’s best done by a professional.

By checking the manufacturer’s safety recommendations and keeping these tips in mind, you should be able to avoid any problems with your Lithium Ion battery powered devices.

Environmental Health and Safety 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

