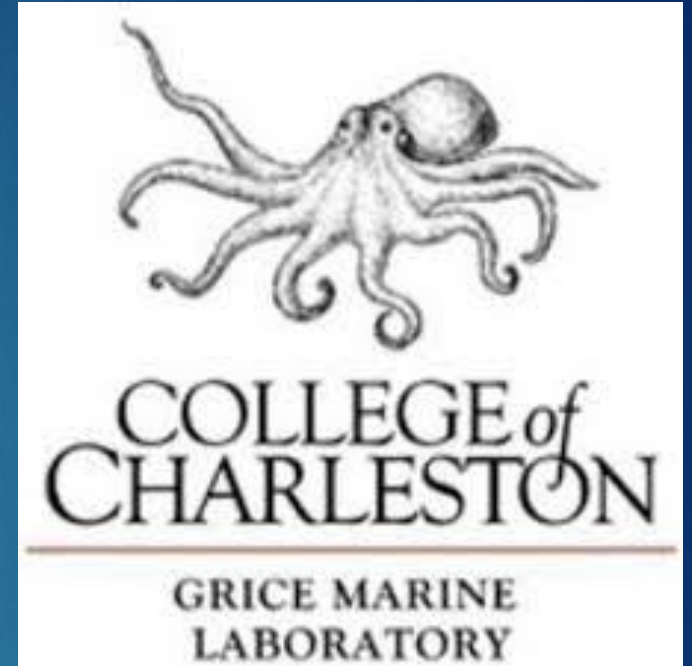


# Grice Marine Laboratory

SAFETY TRAINING CLASS



Greg Townsley – Lab Manager

[townsleyjg@cofc.edu](mailto:townsleyjg@cofc.edu)

843-953-9174

# Outline:

- ▶ Lab safety guidelines
  - ▶ Knowing the risks by understanding:
    - ▶ Globally Harmonized System (GHS) of classification and labeling of chemicals
      - ▶ Safety Data Sheets (SDSs) – What they contain
      - ▶ Hazard communication symbols and pictograms – What they mean
  - ▶ Minimizing the risks by:
    - ▶ Following standard operating procedures (SOPs)
    - ▶ Wearing personal protective equipment (PPE) and using engineering controls
    - ▶ Following general lab rules and prudent practices
    - ▶ Understanding Chemical Hygiene Plan (CHP)
- ▶ Working with specific types of hazards
  - ▶ Chemical, Biological, Radioactive, Physical, Electrical, Mechanical
  - ▶ Safety in the field
- ▶ Emergency Response Procedures

# Knowing the Risks: GHS, SDSs and Labelling



# GHS – Globally Harmonized System of Classification and Labelling of Chemicals

- ▶ Internationally recognized system created by the United Nations.
- ▶ A standardized system through which chemical hazards are identified and communicated to all who may be potentially exposed.
  - ▶ Simplified Safety Data Sheets
  - ▶ Standardized chemical labelling



# Know the Risks: Safety Data Sheets (SDS)

Summary of information on a particular chemical including its hazardous nature

- ▶ Each lab or classroom where chemicals are used has its own site-specific set of SDSs
- ▶ They can be found in clearly marked yellow binders located at a "Right to Know Compliance Center" or on a designated shelf (Plante Lab 205)
- ▶ It is important to consult an SDS before working with hazardous substances or introducing a new chemical into a lab protocol
- ▶ Use as a reference for accidents or spills



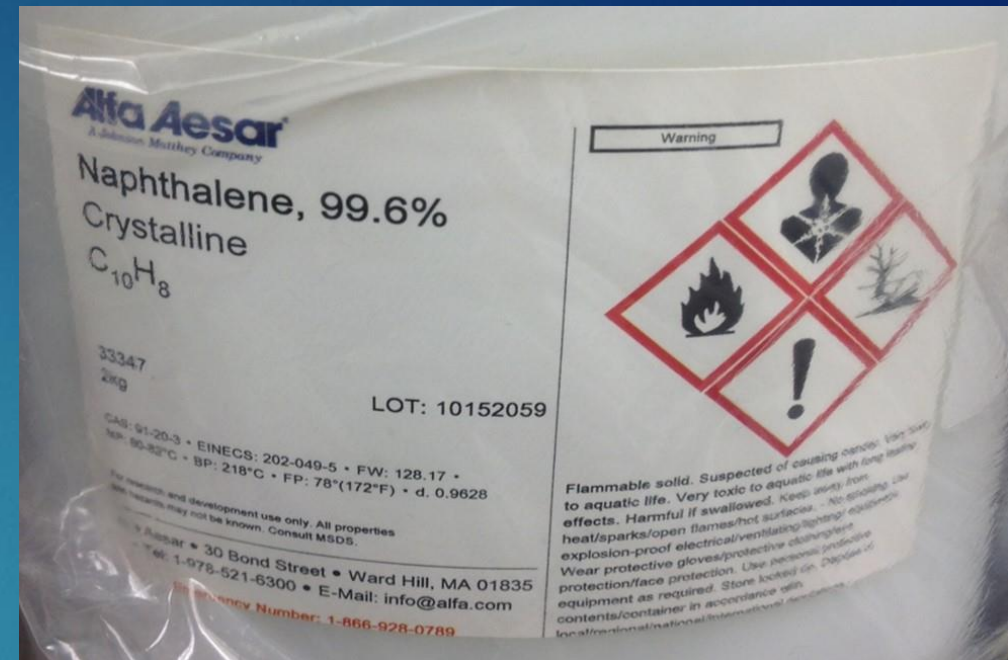
# SDS

## Contents:

Category	Example
1. Product and company identification	Formalin, Sigma-Aldrich
2. Hazard identification	Flammable liquid Cat.4, pictograms
3. Composition (information on ingredients)	Formaldehyde, Methanol
4. First Aid measures	If exposed to skin...
5. Firefighting measures	Extinguisher type (CO2, foam)
6. Accidental release measures	Spill response
7. Handling and storage	Avoid skin contact, flammables cab.
8. Exposure Controls and Personal Protection	List PPE Required
9. Physical and chemical properties	Form, Odor, BP, FP, Relative density
10. Stability and reactivity	Conditions to avoid, incompatible materials
11. Toxicological information	Toxicity, Mutagenicity, Carcinogenicity
12. Ecological information	Toxicity, Persistence, Bioaccumulative
13. Disposal considerations	Waste treatment methods
14. Transport information	DOT regulations
15. Regulatory information	EPA Extremely Hazardous Substance list
16. Other information	NFPA Diamond

# New GHS Labelling

- ▶ 1. Signal Word – Either “Warning” or “Danger”
- ▶ 2. Pictograms
- ▶ 3. Product Identifiers
- ▶ 4. Hazard Statements
- ▶ 5. Precautionary Statements
- ▶ 6. Manufacturer info



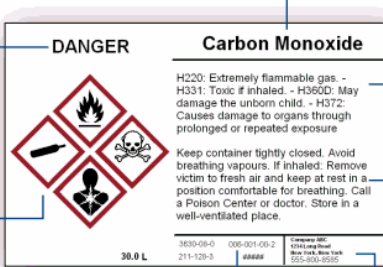
## Six elements of the new Globally Harmonized Standard (GHS) label format

### 1. Signal Word:

Indicates relative level of hazard. "Danger" is used for most severe instances, while "Warning" is less severe.

### 2. Symbols (Hazard Pictograms):

Convey health, physical and environmental hazard information with red diamond pictograms. May use a combination of one to five symbols.



\* Additional Product Identifiers

### 3. Product Name or Identifiers\*

### 4. Hazard Statements:

Phrases that describe the nature of hazardous products and oftentimes the degree of hazard.

### 5. Precautionary Statements:

Phrases associated with each hazard statement, that describe general preventative, response, storage or disposal precautions.

### 6. Manufacturer Information:

Company name, address & telephone number.







# Know the Risks: The Hazard Communication Diamond

- ▶ NFPA color coded rating system
- ▶ Provides information to emergency responders
- ▶ Found outside building, outside doors, on tanks
- ▶ Frequently used in conjunction with GHS labeling
- ▶ Risk type:
  - ▶ Blue=Health, Red=Flammability, Yellow=Reactivity, White=Special Hazard
- ▶ Risk indicators: 1=Minimal, 2=Slight, 3=Moderate, 4=Serious, 5=Extreme



# Minimizing Risk

- ▶ Standard operating procedures (SOPs)
- ▶ Personal protective equipment (PPE)
- ▶ Engineering controls
- ▶ General lab rules and prudent practices
- ▶ Chemical Hygiene Plan (CHP)

# Minimizing Risk - Standard Operating Procedures (SOPs)

- ▶ SOPs are written procedures directing how to safely work with hazardous materials
- ▶ Lab-specific SOPs are required for any work with hazardous chemicals or any application of hazardous operations specific to the protocol
- ▶ Developed by PI (principal investigator) or lab director
- ▶ Follow them!

# Minimizing Risk - PPE



**PROPER  
DRESS  
AND PPE**





# Minimizing Risk - Personal Protective Equipment

The supervisor, principal investigator or laboratory instructor is responsible for determining and clearly identifying which personal protective devices are required for each task performed by employees, students, and /or other type of personnel working on CofC property.

- ▶ Safety glasses/goggles
- ▶ Lab coats or other protective garments
- ▶ Gloves – Nitrile most common. Latex no longer used
- ▶ Mask/respirator – only when fitted and approved by EH&S
- ▶ Ear plugs (workshop tools)



# Rules for Glove Use:

- ▶ Check gloves (even new ones) for physical damage.
- ▶ Some gloves, especially lightweight disposables, may be flammable.
- ▶ Avoid the contaminated exterior contacting the skin.
- ▶ Dispose of contaminated gloves in proper container.
- ▶ Do not attempt to re-use disposable gloves.
- ▶ Never wear possibly contaminated gloves outside of the laboratory or to handle telephones, computer keyboards, etc.

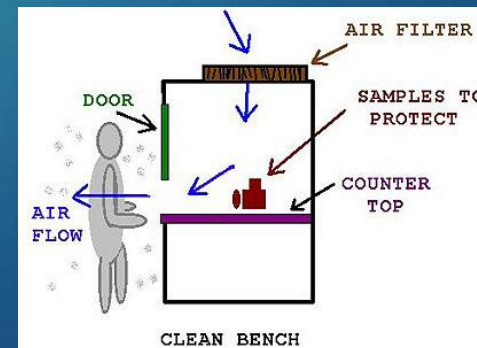
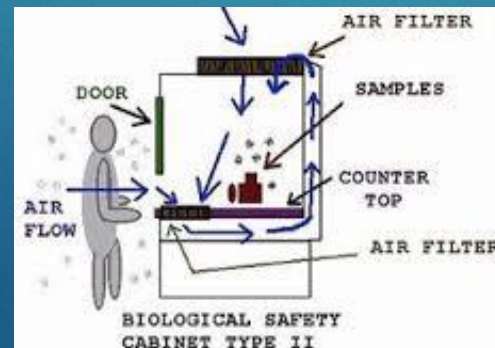
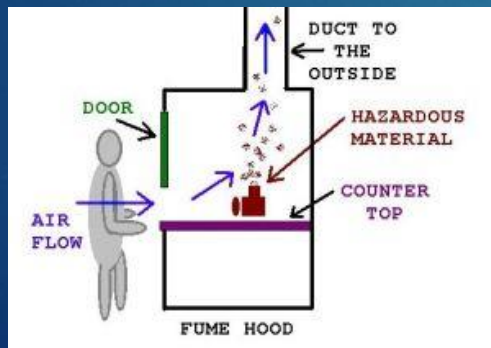


# Proper Glove Removal



# Minimizing Risk – Engineering Controls/Containment Devices

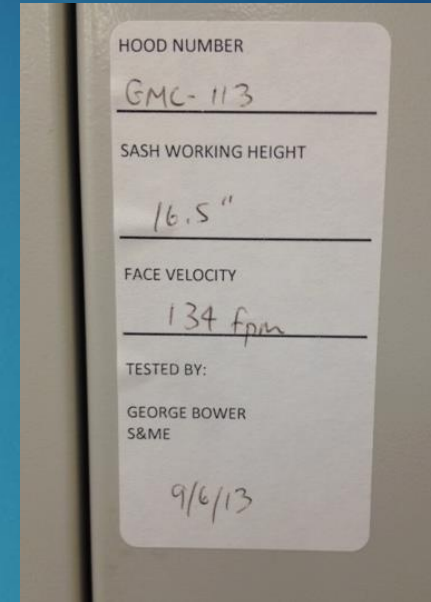
- ▶ Chemical Fume Hood (210, 209, 205, 113)
  - ▶ Helps reduce exposure to hazardous liquids, vapors, dusts and mists
- ▶ Biosafety Cabinet (Plante 205)
  - ▶ Provides personal and environmental protection from potentially infectious agents. HEPA filter and UV.
  - ▶ Moderate to High risk infectious agents (BSL2 and BSL3)
- ▶ Clean Bench (MCF 210, Isaure's lab)
  - ▶ Protects work material from contamination. HEPA filter and UV.





# Chemical Fume Hood Use Rules

- ▶ Use when required by SOP and SDS
- ▶ Follow sash height stated on CFH certificate
- ▶ Keep experiments
  - ▶ 6-12" from front
  - ▶ 1-2" from back
  - ▶ Don't block slots/baffles
- ▶ Keep sash down as far as possible and no higher than working height
- ▶ Don't overcrowd the bench surface
- ▶ Notify Lab Manager of any Fume Hood problems



# Minimizing Risk - General Lab Rules and Prudent Practices:

- ▶ Closed toed shoes are required in labs (no flip flops)
- ▶ Confine loose hair and clothing
- ▶ No drinking or eating is allowed in the labs (209 designated area exception)
- ▶ Always leave your work area clean and orderly
- ▶ Never remove chemicals, biological samples, or laboratory equipment from a lab without proper authorization
- ▶ Do not work alone in the laboratory if you are working with hazardous materials or equipment
- ▶ Never leave an experiment unattended unless proper safety precautions are in place



**BEHAVIOR**



# Minimizing Risk - CofC Chemical Hygiene Plan (CHP)

- ▶ The Occupational and Safety Health Administration (OSHA) requires that laboratory personnel be made aware of the CHP for their place of work.
- ▶ The College EH&S Department develops and maintains a generic CHP to be used by the College's laboratories on all campuses and other related facilities.
- ▶ All College affected personnel (faculty, staff, students etc.) should be familiar with the contents of the CHP and have continuous access to it.
- ▶ Located with SDS binders
- ▶ Lab workers are required to read the CHP and complete and return a copy of the CHP Awareness Certification.



# Types of Lab Hazards

- ▶ Chemical
- ▶ Biological
- ▶ Radiological
- ▶ Physical
- ▶ Electrical
- ▶ Mechanical

# Chemical Hazards

Chemical safety involves all phases of chemical use from procurement, storage, transportation, manipulation, decontamination and disposal.

- ▶ Health Hazard (through inhalation, absorption, ingestion)
  - ▶ Corrosives – Hydrochloric acid
  - ▶ Carcinogens – Benzene, Formaldehyde
  - ▶ Sensitizers – Formaldehyde, Latex
  - ▶ Irritants – Ammonia, Formaldehyde
  - ▶ Mutagens – Acrylamide, Sodium azide
  - ▶ Toxins – Hydrogen sulfide, Formaldehyde
- ▶ Physical Hazard
  - ▶ Flammables – Flashpoint below 100°F (Alcohols, Acetone, organics)
  - ▶ Combustibles – Flashpoint over 100°F (Ethylene glycol, Calcium)
  - ▶ Oxidizers – Hydrogen peroxide, Oxygen, Sulfuric acid



Identified  
by  
Pictograms

# Safe Chemical Handling



**SAFE CHEMICAL  
HANDLING**



# Chemical handling and storage

- ▶ Use proper PPE
- ▶ Do not store chemicals on the floor
- ▶ Shelves and counters should be clean and not overcrowded
- ▶ Label and date all chemicals (lab name, date received, date opened)
- ▶ Pour liquids with the label facing up to prevent damage to the label
- ▶ Never use abbreviations or scientific formulas when labeling chemicals
- ▶ Always transport chemical in a secondary container
- ▶ Work with the smallest amounts possible
- ▶ Never smell or taste chemicals
- ▶ Return chemicals to previous storage location



# Working with Chemicals – Waste Disposal

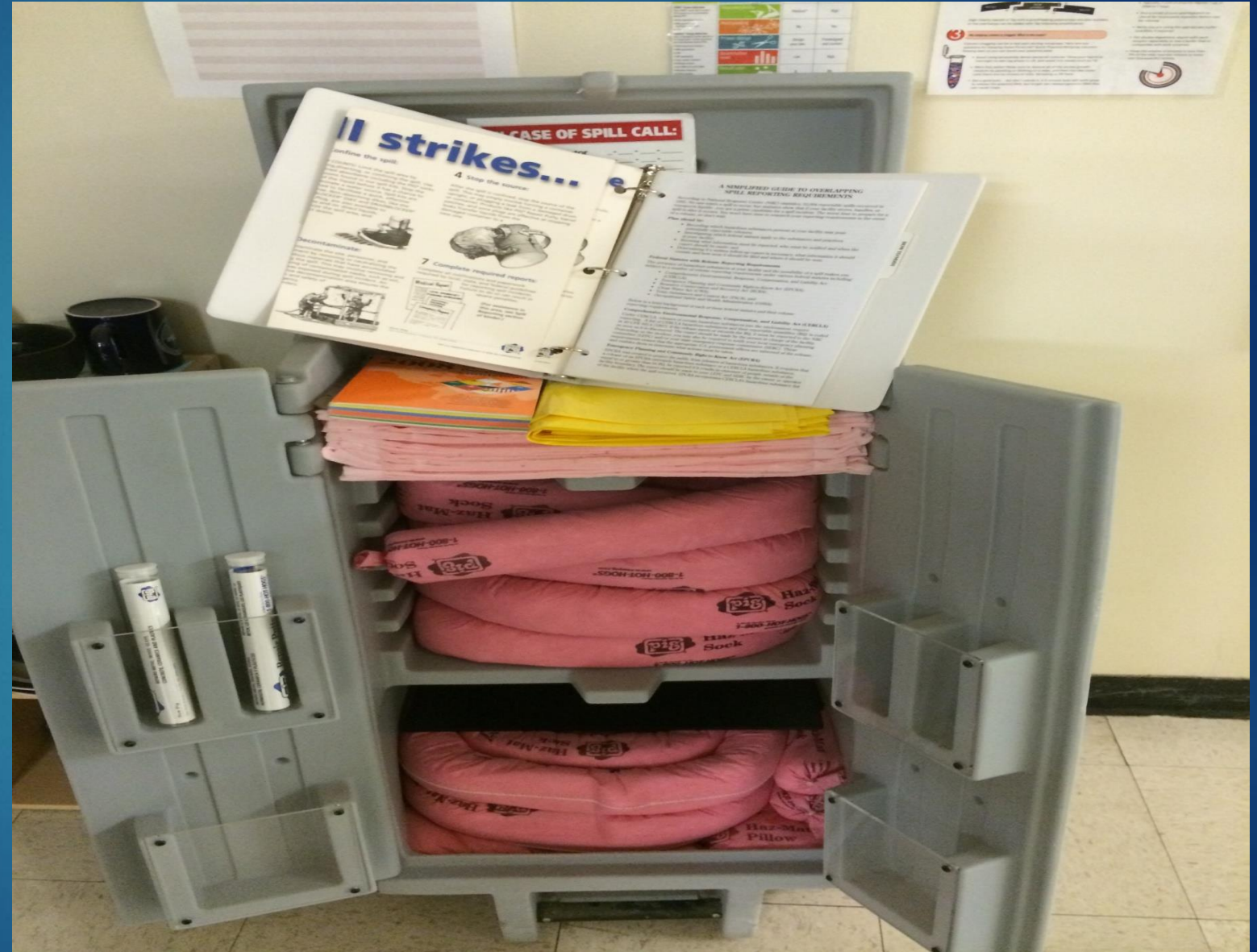
- ▶ NEVER pour chemicals down the drain
- ▶ Label all chemical waste with name, date and concentrations of chemical involved
- ▶ Leave container 10% empty for expansion
- ▶ Notify supervisor or lab manager before waste container is 90% full

# Chemical Spills

- ▶ Understand spill control plan when working with hazardous chemicals
- ▶ Have the appropriate spill control measures available
- ▶ Notify personnel in the area
- ▶ Isolate spill area
- ▶ Never try to clean up a major spill
- ▶ Small spills can be cleaned up with help from your supervisor or the lab manager
- ▶ The mobile spill kit is located in the hall of the second floor
- ▶ Notify your supervisor and the lab manager of all spills

# Second floor Spill Kit

Outside of MCF 210



# Biological Hazards



- ▶ The term Biohazard is defined as:

An infectious agent or other hazardous biologic material that presents a risk or potential risk to the health of humans, animals, or the environment.

Biohazards include: certain types of recombinant DNA, organisms and viruses infectious to humans, animals, or plants (e.g., parasites, viruses, bacteria, fungi, prions, and rickettsia), and biologically active agents (e.g., toxins, allergens, and venoms)

Biohazards can cause disease in other living organisms or cause significant impact to the environment or community.



# Biological Hazards

- ▶ It is important to remember that all animal tissue and bodily fluids are a potential source of infection
- ▶ Sources of biological hazards include bacteria, viruses, insects, plants (toxins and poisons), animals including marine organisms, and humans
- ▶ These sources can cause a variety of health effects ranging from skin irritation, allergies, infections and worse
- ▶ The biohazard symbol is used to indicate materials that carry a health risk
- ▶ Your supervisor will inform you of any risk groups present in the lab you are working in



# Risk Groups

- ▶ RG1 – not infectious to healthy adults
- ▶ RG2- generally agents that are transmitted via ingestion, through mucous membranes, and through the skin. The severity of disease is not as significant (usually) as high risk agents, and treatment is generally available. Mortality and morbidity is lower than high risk group classifications.
- ▶ RG3-all routes of exposure are in play, especially the AIRBORNE route, severity in terms of morbidity and mortality are elevated and infectious dose is generally lower for RG3 agents. Treatment may/may not be available.
- ▶ RG4- all routes of exposure, much more significant mortality/morbidity than RG3 agent, treatment usually not available.

# Biological Safety

When working with potentially infectious materials:

- ▶ Follow SOPs
- ▶ Wear personal protective equipment
- ▶ Use a biosafety cabinet if procedures might generate aerosols (Do Not use a CFH when handling infectious agents)
- ▶ Wash hands frequently after removing gloves and before exiting the lab
- ▶ Disinfect work areas and equipment after use with appropriate disinfectant
- ▶ Take special care when working with sharps (needles, Pasteur pipets, scalpels, capillary tubes)
- ▶ Never eat, drink, smoke, handle contact lenses, apply cosmetics, or take medicine in a lab
- ▶ Decontaminate and dispose of biological wastes properly
- ▶ We encourage you to talk to the supervisor if you know you have a health condition that would put you at higher risk when working with potentially infectious materials ( i.e. immunosuppressed)

# Radioactive Hazards

## ▶ Reducing Exposure:

- ▶ Time - Reduce time in areas containing radioactive materials
- ▶ Distance - Keep your distance from radioactive materials
- ▶ Shielding - Use proper shielding to reduce exposure if shielding is necessary
- ▶ Observe signage
- ▶ PPE
- ▶ Proper storage and disposal
- ▶ Training from CofC Rad training officer





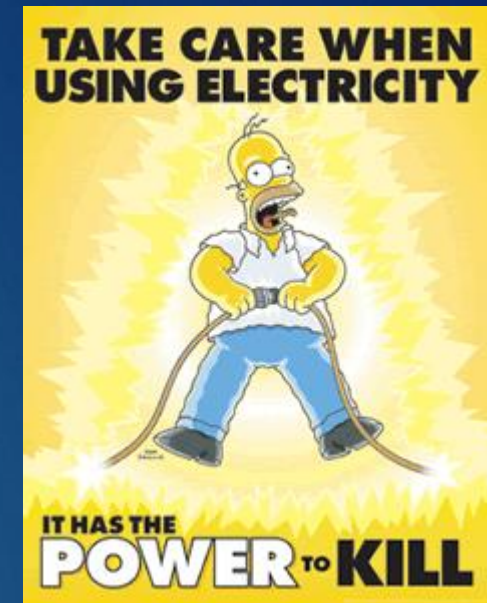
# Other Hazards

- ▶ Electrical hazards
- ▶ Compressed Gasses
- ▶ Falls - Wet floors and Trip Hazards
- ▶ Mechanical equipment (autoclave, centrifuge)
- ▶ Power tools
- ▶ UV lights (sunburns)



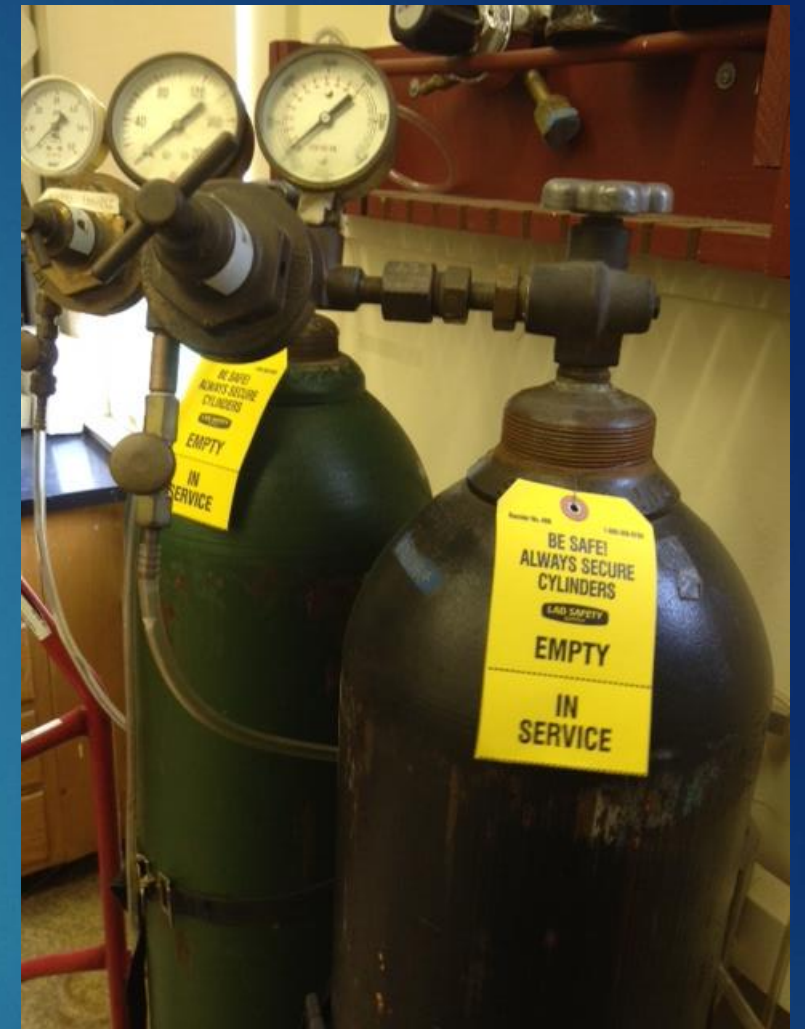
# Electrical Safety

- ▶ Do not overload outlets
- ▶ Extension cords can only be used for a short-term temporary situation. Long term use of extension cords is an OSHA violation
- ▶ Never double up (daisy chain) extension cords. Ensure the extension cord used is rated for the electrical current to be used
- ▶ When working around water, always use a Ground Fault Circuit Interrupter (GFCI) outlet
- ▶ Never handle electrical equipment when wet
- ▶ Use caution when working around flammable liquids. Be aware of electrical ignition sources
- ▶ Report faulty equipment to your supervisor or the lab manager immediately
- ▶ If a breaker or GFCI trips, you should notify your supervisor or the lab manager immediately
- ▶ Saltwater is a great conductor of electricity
- ▶ All electrical connections in the wet lab must be approved by the Marine Operations Manager (Pete Meier)



# Compressed Gas Safety

- ▶ All tanks must be secured above the center of gravity by approved supports
- ▶ Ensure proper fitting of connections
- ▶ Cylinders must be appropriately tagged
- ▶ Cylinders in transit or not in use must be capped
- ▶ Move only with appropriate cylinder cart





# Safety in the Field

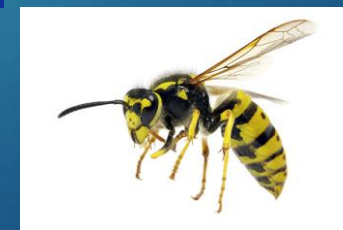
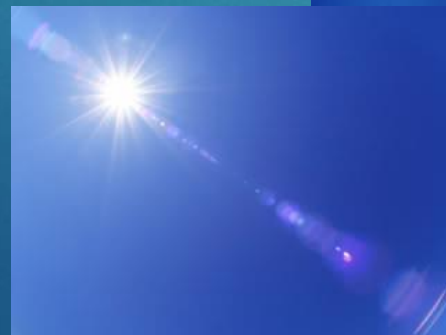
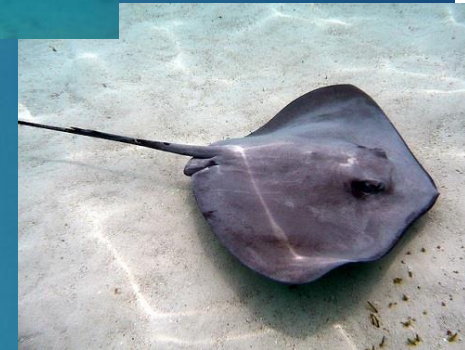
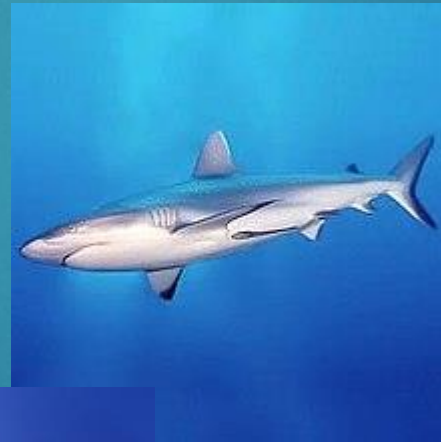
- ▶ If possible, work with a partner.
- ▶ Let someone know your itinerary – location, duration, contact info.
- ▶ If using a boat or kayak, complete a float plan located outside of room 116 and submit it to Pete Meier (Marine Operations Manager).
- ▶ Plan and prepare for health and safety problems that may occur in the field – hazardous plants, animals, terrain, equipment, and weather conditions.
- ▶ Check out a fieldwork first aid kit from the Lab Manager (room 109).
- ▶ If collecting living organisms, be sure someone in the group has a Collector's Permit.
- ▶ Follow SOPs if applicable.
- ▶ Consider taking: PPE if necessary, sun protection, bug spray.





# Types of Hazards Encountered in the Field

- ▶ Environmental
  - ▶ Heat & cold, storms, lightning, tides.
- ▶ Animals and Pests
  - ▶ Bites, stings
- ▶ Diseases and Infections
  - ▶ Mosquitos and ticks
  - ▶ Oyster cuts
  - ▶ Microorganisms
- ▶ Physical
  - ▶ Sunburn, injuries



Know what to do  
in case of an accident or injury

# Emergency Response Procedures

Notice contains:

- Emergency procedures
- Location of safety equipment
  - AED Unit (Defibrillator)
  - First Aid Kits
- Important phone numbers

# GML Emergency Procedures and Contact Information Notice

## GML EMERGENCY PROCEDURES and Contact Information

### FIRE

- 1) Pull fire alarm (this automatically notifies the Fire Department and CoFC Public Safety).
- 2) Evacuate the building and move to the GML parking lot.

### INJURIES AND MEDICAL EMERGENCIES

*All injuries must be reported to the individual's Supervisor and/or the Lab Manager within 24 hours*

- **Serious Medical Emergency** (ambulance required)
  - Call 911.
  - Administer first aid. AED (defibrillator) located in main entrance stairwell.
  - Have responders transfer the individual to Roper Hospital ER.
- **Work Related Urgent Care for Faculty, Staff, and Students employed by CoFC**  
*All work-related injuries must be reported to Human Resources (843)-953-7320*
  - M-F 8:30am to 5:00pm:
    - Concentra - 4115 Dorchester Rd. suite 100 Charleston 29415 (843) 554-6737
  - Sat. 9:00am to 3:00pm:
    - Concentra - 7519 Rivers Ave. North Charleston 29406 (843) 735-5020
  - All other hours:
    - Roper Hospital - 316 Calhoun St. downtown Charleston
  - If transportation not available, contact Green Taxi (843-819-0846) or Yellow Cab (843-577-6565)
    - Inform them CoFC has an account with the "State Accident Fund".
- **Non-Work Related Urgent Care for CoFC Students**
  - M-F 8:30am to 5:00pm:
    - CoFC Student Health Services - 181 Calhoun St. downtown Charleston
  - After hours and weekends:
    - Doctor's Care Clinic (M-F until 8pm Sat/Sun 9-5) - 743 Folly Rd. (843) 762-2360
    - Roper St. Francis Clinic (M-F until 9pm Sat/Sun 8-4) - 325 Folly Rd. (843) 402-5283
    - Roper Hospital - 316 Calhoun St. downtown Charleston
- **Urgent Care for Visitors and Summer REU Students**
  - Transport to the after-hours locations listed directly above.
- **Minor Injuries** - Administer first aid
  - Kits located in main building hallways, front office (102), lab 113, and dorm kitchen.

### CoFC PUBLIC SAFETY CONTACTS

- Emergency: 843-953-5611
- Non-Emergency: 843-953-5609 (i.e. keys locked in car, locked out of dorm room)

### FACILITY AND MAINTENANCE ISSUES

- M-F 8:30-5:00 (emergency and non-emergency):
  - Contact Greg Townsley (Lab Manager) - room 109, (843) 953-9174 [townsleyjg@cofc.edu](mailto:townsleyjg@cofc.edu)
    - Alternate contact: Pete Meier - room 116, (843) 953-9218 [meierp@cofc.edu](mailto:meierp@cofc.edu)
    - Alternate contact: Katie Hiott - Front Office room 102, (843) 953-9200
- After-hours and weekend **emergency** maintenance issues:
  - Contact CoFC Physical Plant - (843) 953-5598
    - Give name, location and nature of emergency maintenance issue.
- Power Outage (after hours) - Call Physical Plant # above to notify CoFC of outage.

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Grice

Evacuation Area

Fort Johnson Hill

Google earth

Imagery Date: 3/7/2015 32°45'05.18" N 79°53'53.31" W elev 5 ft eye alt 655 ft

1989

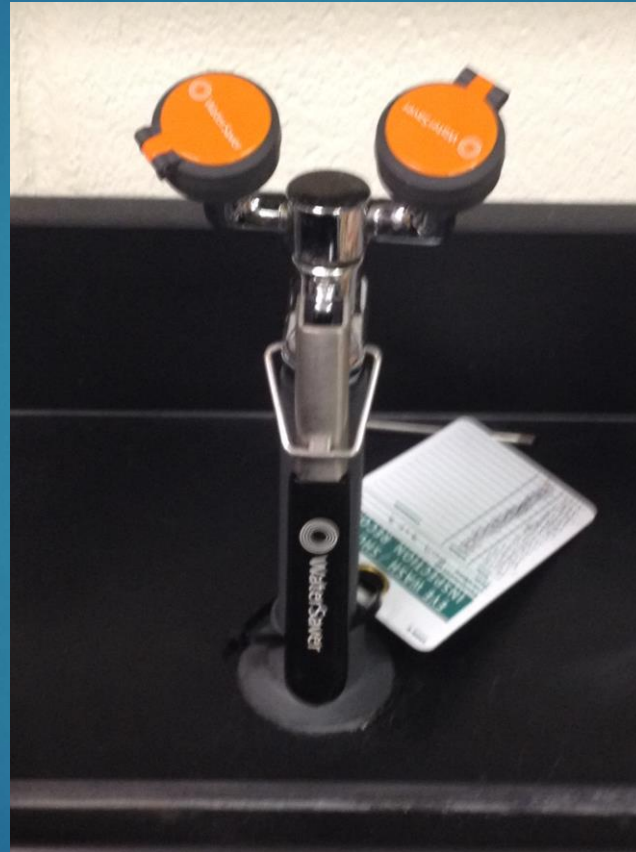




# First Aid and Emergency Response Equipment



Emergency Shower



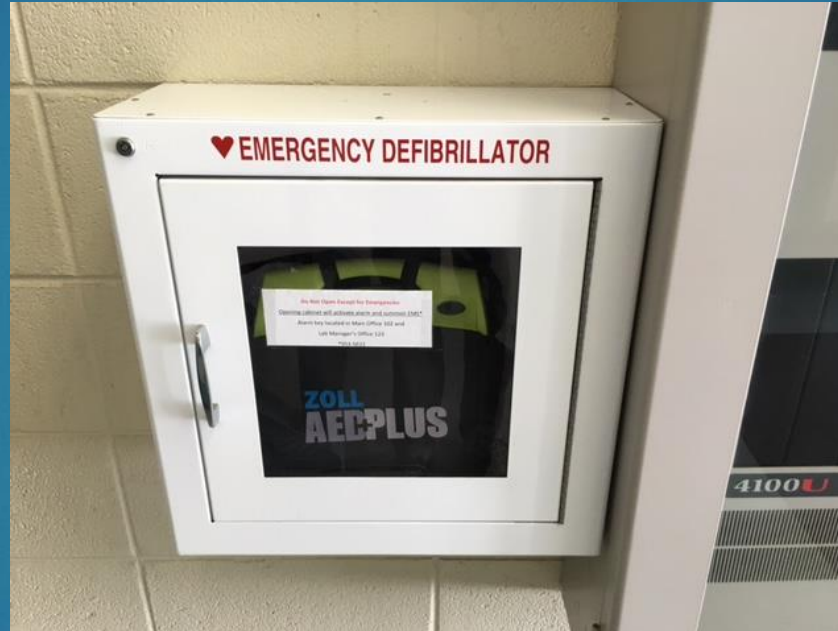
Eyewash Station



First Aid Kit

# AED – Automated External Defibrillator

Located in main entrance stairwell



An **AED** is a portable device that checks the heart rhythm and can send an electric shock to the heart to try to restore a normal rhythm. **AEDs** are used to treat sudden cardiac arrest - a condition in which the heart suddenly and unexpectedly stops beating.

# First Aid and Emergency Response Equipment



- P.** Pull the pin
- A.** Aim the extinguisher nozzle at the base of the fire
- S.** Squeeze trigger
- S.** Sweep the extinguisher from side to side (with back to exit)





**SAFETY  
EQUIPMENT**

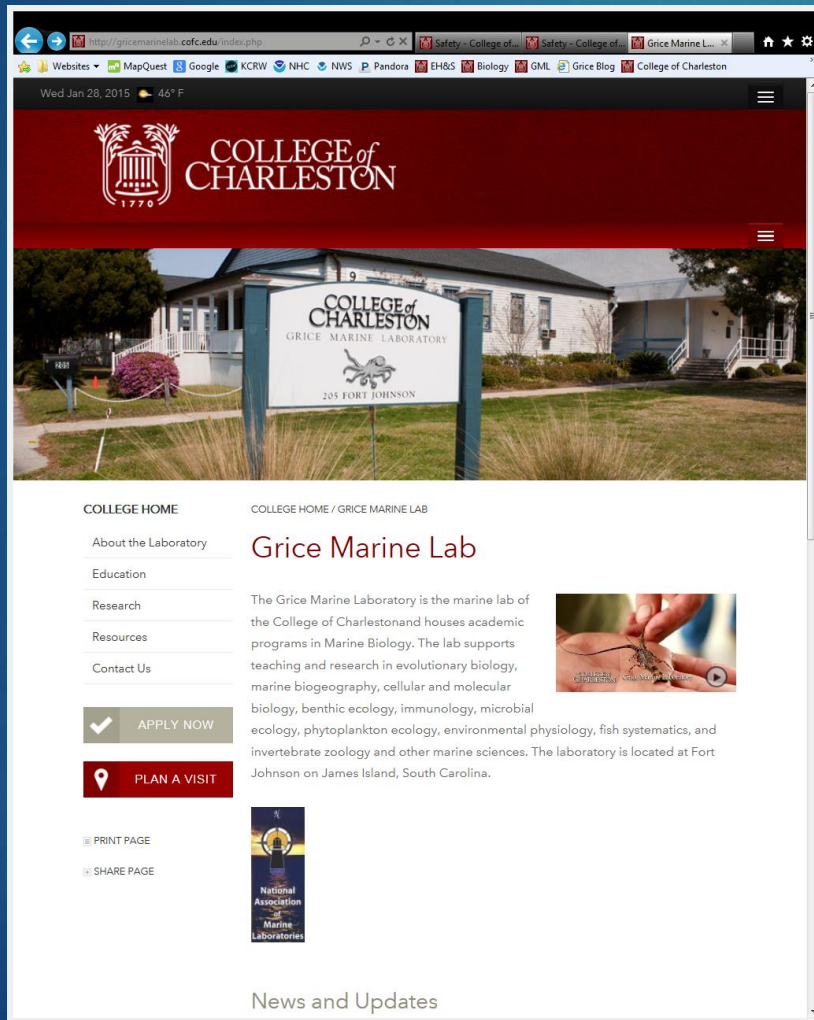


# In Summation:

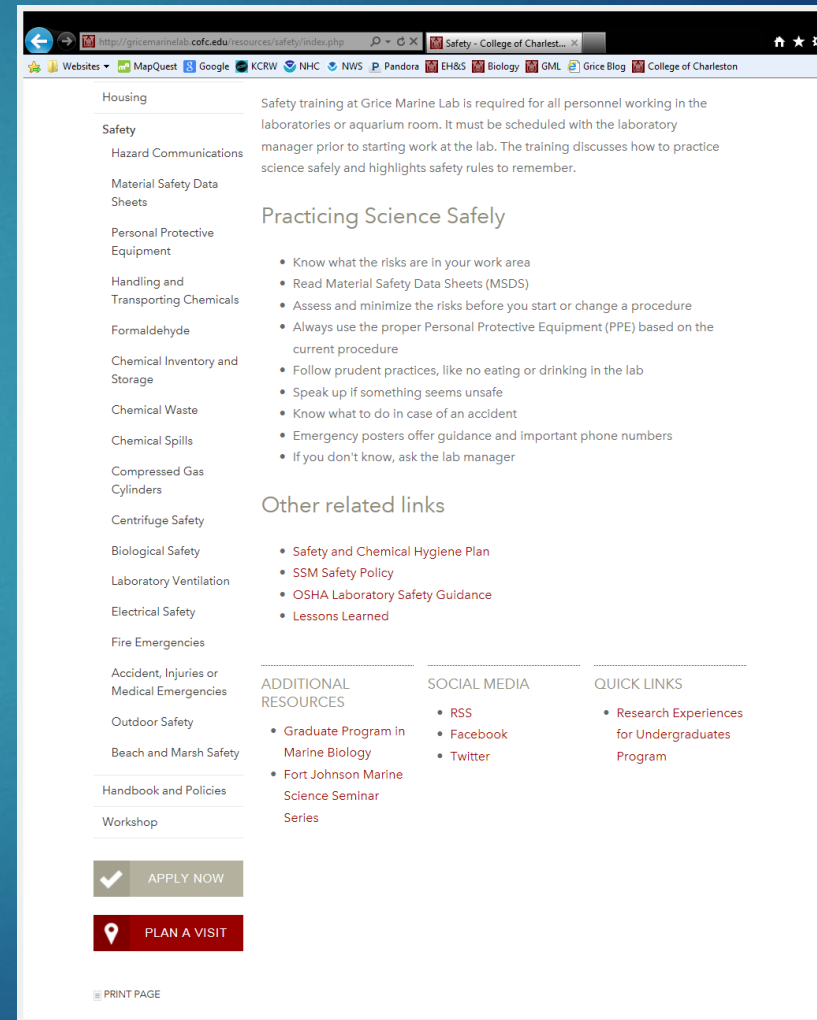
You are responsible for knowing the chemical, biological, electrical, mechanical and physical hazards associated with the materials and equipment being used in the laboratory you are working in.

- ▶ Be aware of surroundings
- ▶ Know the materials and equipment you are working with
- ▶ Follow SOPs
- ▶ Use appropriate personal protective equipment
- ▶ Use appropriate engineering controls (CFH, BSC)
- ▶ Know what to do and who to contact in case of accident or injury
- ▶ If you are unsure or unclear about a procedure or task, let your supervisor know before attempting any work
- ▶ Ask questions, express concerns, report hazards
- ▶ Report accidents and injuries to your supervisor and/or the Lab Manager immediately
- ▶ Remember: workplace Safety is a Shared Responsibility

# Additional Information: gricemarinelab.cofc.edu



The screenshot shows the homepage of the Grice Marine Lab. At the top is the College of Charleston logo and name. Below is a large photo of the lab building with a sign that reads "COLLEGE of CHARLESTON GRICE MARINE LABORATORY 205 FORT JOHNSON". A navigation menu on the left includes "About the Laboratory", "Education", "Research", "Resources", and "Contact Us". The main content area features the heading "Grice Marine Lab" and a paragraph describing the lab's focus on marine biology research. A small video player is embedded in the text. At the bottom, there are buttons for "APPLY NOW" and "PLAN A VISIT", along with "PRINT PAGE" and "SHARE PAGE" options. A "News and Updates" section is partially visible at the very bottom.



The screenshot shows a safety page on the Grice Marine Lab website. The page is titled "Practicing Science Safely" and contains a list of safety topics on the left side, including "Housing", "Safety", "Hazard Communications", "Material Safety Data Sheets", "Personal Protective Equipment", "Handling and Transporting Chemicals", "Formaldehyde", "Chemical Inventory and Storage", "Chemical Waste", "Chemical Spills", "Compressed Gas Cylinders", "Centrifuge Safety", "Biological Safety", "Laboratory Ventilation", "Electrical Safety", "Fire Emergencies", "Accident, Injuries or Medical Emergencies", "Outdoor Safety", "Beach and Marsh Safety", "Handbook and Policies", and "Workshop". The main content area provides detailed information for "Practicing Science Safely", stating that safety training is required for all personnel and discussing the importance of scheduling training with the lab manager. Below this, there are "Other related links" such as "Safety and Chemical Hygiene Plan", "SSM Safety Policy", "OSHA Laboratory Safety Guidance", and "Lessons Learned". At the bottom, there are sections for "ADDITIONAL RESOURCES", "SOCIAL MEDIA" (with links to RSS, Facebook, and Twitter), and "QUICK LINKS" (with a link to "Research Experiences for Undergraduates Program"). Similar to the homepage, there are "APPLY NOW" and "PLAN A VISIT" buttons, as well as "PRINT PAGE" and "SHARE PAGE" options.

# Additional Information: <http://ehs.cofc.edu>


The screenshot shows a web browser window displaying the Laboratory and Research Safety page on the College of Charleston website. The browser's address bar shows the URL [ehs.cofc.edu/laboratory-and-research-safety/index.php](http://ehs.cofc.edu/laboratory-and-research-safety/index.php). The page features a dark red header with the College of Charleston logo and navigation links for Admission and Financial Aid, About, Academics, Campus Life, Athletics, and Alumni. The main content area is white and includes a sidebar with links to Environmental Health and Safety, About the Department, General Health and Safety, Laboratory and Research Safety, Biosafety, Chemical Safety, Laser Safety, Contractor Health and Safety, Waste Management, and Contact Us. The main content area has a breadcrumb trail: COLLEGE HOME / ENVIRONMENTAL HEALTH AND SAFETY / LABORATORY AND RESEARCH SAFETY. The title is "Laboratory and Research Safety". Below the title is a paragraph explaining that Laboratory Safety refers to the use and handling of hazardous chemicals in a laboratory. The Department of Environmental Health and Safety is responsible for providing overall guidance and supervision for laboratories on campus. A "Downloads" section lists three documents: OSHA Lab Safety Guidance (pdf, 506 KB), Standard Operating Procedures (doc, 63 KB), and Training Acknowledgement (docx, 63 KB). At the bottom of the page, there are social media icons for Facebook, Twitter, LinkedIn, and YouTube, along with a "PRINT PAGE" and "SHARE PAGE" option.

Laboratory and Research Safety - College of Charleston - Google Chrome

[ehs.cofc.edu/laboratory-and-research-safety/index.php](http://ehs.cofc.edu/laboratory-and-research-safety/index.php)

Apps Websites Google KCRW NHC NWS Pandora EH&S Biology GML Grice Blog College of Charl... MyCharleston MD Cascade Server MSDS EPMS Other bookmarks

Fri May 29, 2015 7:29 F MyCharleston Library Directory Site Index Emergency Info Search CoFC Site

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**Laboratory and Research Safety**

Laboratory Safety refers to the use and handling of hazardous chemicals in a laboratory. The Department of Environmental Health and Safety is responsible for providing overall guidance and supervision for laboratories on campus.

**Downloads**


- OSHA Lab Safety Guidance (pdf, 506 KB)
- Standard Operating Procedures (doc, 63 KB)
- Training Acknowledgement (docx, 63 KB)
- Chemical Orde Pre-Use Letter of Certification (pdf, 141 KB)


APPLY NOW

PLAN A VISIT

PRINT PAGE

SHARE PAGE



 COLLEGE of CHARLESTON

Colleges and Schools Information For Quick Links



Thank you!

...any questions?