

Department Safety Coordinators together with Research Safety

“Building a Safety Culture”

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UNIVERSITY

Office of Research Safety



The Office of Research Safety (ORS) strives to promote a culture of safety, research integrity, and high quality research within the University community. Along with the Office of Research Compliance, we work to facilitate University research, teaching and public service programs by providing oversight and technical consultation on all research safety issues.



Agenda

- Introductions – DSC and ORS staff
- Overview of the Office of Research Safety & Commitment
- The DSC Role
- Overview of Lab inspection results
- Overview of HAZCOM Inspection results
- Incident reviews and Near Miss reporting
- Q&A

Safety as part of the Mission

- Delivering world class research
- Part of the student learning experience
- Safety is part of any job, any career
- Safety performance can help or hurt the organization's brand
- APLU Safety Culture Guidelines
 - University formed Task Force



Office of Research Safety

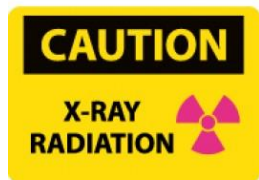


- 14 professionals
- Located in Clemson Centre, Suite 104
- Research Park and CURI (North Charleston)

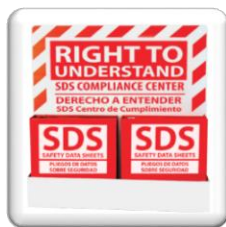
ORS Programs

<http://www.clemson.edu/research/safety/>

Radiation Safety



Industrial Hygiene & Lab Safety



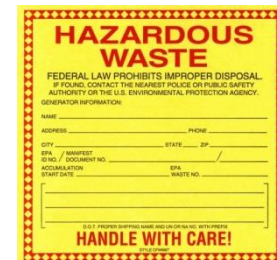
Biosafety



Training



General Safety



Hazardous Materials Management

The DSC Role

- The Department Safety Coordinator (DSC) is an integral part of promoting health and safety throughout all campuses.
- The DSC's role is to assist with the implementation of the Research Safety program for their assigned department.
- All DSCs will receive a monthly email with safety materials, Fact Sheets or safety information to share with their department.
- Quarterly meetings to discuss issues and new information

The Office of Research Safety would like to thank you for your involvement and your continued support.

DSC Activities

- Attend Quarterly DSC meetings
- Communicate monthly safety information from Research Safety to personnel in their department,
- Communicate important safety information from Research Safety
- Participate in Lab or HAZCOM and/or Satellite Accumulation Areas conducted by Research Safety, when available.
- Notify Research Safety of new PIs or researchers
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- Notify Research Safety of PIs that will be leaving
- Providing new employees the information on Research Safety.
- Participate with incident investigations as needed.
- Be a liaison for safety related questions and concerns.
- Be a positive role model for safety.



Monthly Topics 2017

Month	Safety Topic	Lab Safety Coordinator
February	Laboratory Inspections and signage	Read, disseminate info, Conduct self-inspections
March	Personal Protective Equipment	Read, disseminate info, Identify PPE needs and respirator wearers
April	Hazardous materials and spills	Read, disseminate info, Check for spill kits in areas
May	Hazardous Waste	Read, disseminate info, SAA inspections
June	Radiation Safety	Read, disseminate info, Identify Radiation sources, lasers, UV
July	Heat Stress	Read, disseminate info,
August	BIOSAFETY	Read, disseminate info, Verify IBCs and BSC
September	Laboratory Safety	Read, disseminate info, lab employees sign CHP
October	Fume hoods and ventilation	Read, disseminate info, verify fume hoods are operational
November	Fire Safety and Emergency equipment	Read, disseminate info
December	Chemical Segregation	Read, disseminate info

New Research Lab Setup Checklist

LAB INFORMATION	
Principal Investigator:	
Department:	
PI Phone Number:	
PI Email:	
Building:	
Lab Number:	
Dept. Safety Coordinator:	
Move In Date:	

- Complete Basic Lab Safety Training**
Training must be completed by the PI and all Lab Personnel
 - [Chemical Hygiene Training](#)
 - [Hazardous Waste Training](#)
 - If chemicals (including dry ice) will be shipped, Hazardous Materials Shipping training is required. Contact the [Hazardous Materials Manager](#) to schedule a live training session.
 - See [Training Matrix](#) for additional training requirements
- Review Lab Safety Documents**
All Lab Personnel must sign the Acknowledgement Page on page 3 of the CHP
 - [Lab Safety Manual](#)
 - [Chemical Hygiene Plan](#)
- Post a [Lab Door Sign](#)**
- Label all Chemical Storage Areas**
 - See [Chemical Storage Guidelines](#) for more information
- Submit a [Chemical Inventory](#) to cheminventory@clemsion.edu**
 - See [Chemical SOP List](#) for chemicals that require Standard Operating Procedures
- Provide compatible Personal Protective Equipment (PPE) for Lab Personnel**
 - See [PPE Guidelines](#) for more information
- Setup a Hazardous Waste Storage Area (Satellite Accumulation Area)**
 - See [SAA Poster](#) for more information

Friendly Reminders

- Safety Shower must be tested Monthly
- Eyewash must be tested Weekly
- Fire Extinguishers must be visually inspected Monthly
- [Safe Work Practices with Chemicals](#)
- [Safe Work Practices with Lab Equipment](#)

[Biological Safety & Radiation Safety](#) Information

[Office of Research Safety Contact Information](#)

Please email a signed checklist to the [Chemical & Lab Safety Manger \(nkelly@clemsion.edu\)](mailto:nkelly@clemsion.edu) to schedule a lab walkthrough.

PI Signature

Date

DSC Signature

Date

New Lab and HAZCOM Inspection Program

- Collaborative process-encourages success
- Outreach with one on one training
- Simplified items-based on UCLA
- Encourages preparation and self inspections
- Escalation process to close out critical items
- Web resources

<http://www.clemson.edu/research/safety/inspections.html>

Common Lab Inspection Findings

- Update Lab Door Sign
- Chemical Segregation
- Fire Extinguisher Visual Inspection
- CHP & Signed Acknowledgement Page
- Cylinder Storage
- Training
- Chemicals Stored in Fume Hoods
- Respirators/Dust Masks in the Labs
- Chemicals & Chemical Storage Labeling
- Safety Shower/Eyewash Testing

515 Inspections completed
64% on campus labs completed
61.5% off campus labs completed

Common Lab Inspection Findings

Training

- PIs and Lab Personnel must complete all training required by Research Safety.

Labeling

- All chemical containers and storage areas must be properly labeled.

Check Safety Equipment

- The Safety Shower must be tested monthly, and the Eyewash weekly.
- Fire Extinguisher visual inspections must be done monthly.

Chemical Segregation

- Properly segregate incompatible chemicals. A storage guide can be found on the RS website.



<http://www.clemson.edu/research/safety>

Remember

Update Lab
Door Signs

Read & Sign
the CHP

Gas
Cylinders:
Chains not
Straps

Contact RS
before use
of
respirators/
dust masks

HAZCOM Top 5 Findings

- Labeling (Containers, Storage Cabinets, etc.)
- Current Copy or QR Code for HAZCOM Plan
- Trainings
- Chemical Inventories
- Flushing Safety Shower (monthly) and Eye Wash (weekly)

25 areas completed 2015-2016
Still identifying all areas

What is a Near Miss?



Figure 1 Safety Pyramid

Near misses are incidents or events that could have resulted in injuries or other adverse consequences, but fortunately did not.

Nice Catch, Tiger! APP

- Easy way to report near misses
- Share best practices across all campus
- Encourages collaboration among peers
- Reward program for those reporting
- Develop database to track near misses and identify trends.

Nice Catch, Tiger!



*On the Prowl
to Promote
Research Safety!*



Download the App Today!

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RESEARCH SAFETY

Have you had an experience,
observation, or close call?

Tell us so safety
can be improved in
Research & Teaching
areas around campus!

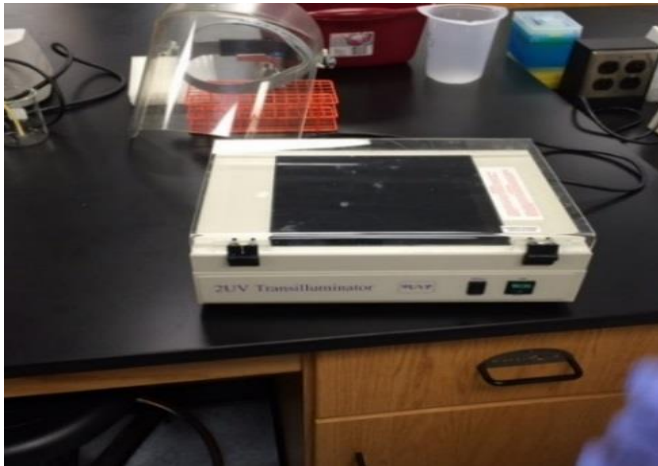
Incidents

Genetics teaching lab

Transilluminator with UV lightboxes to cut DNA strands (13 years without an incident)

Corrective Actions:

Alternate procedure for lab.
TA disciplined,
UV Fact sheet developed .



Biology teaching lab

Shark dissection preserved in Carosafe.
Strong formaldehyde odors

Corrective Actions:

Modification to lab 2 sharks per lab,
Continuous air monitoring
Additional ventilation.
Supplier changed their processes



Responsibilities

- The Principal Investigator is responsible for the overall safety and compliance in the lab or shop area
- Reporting of incidents and near misses promptly and investigating the causes of the incident to make improvements.
- Safety is everyone's responsibility – A Team Effort
- [ASK Research Safety](#) – submitted questions online.

Questions?



Office of Research Safety
391 College Ave. Suite 104

<http://www.clemson.edu/research/safety/>

“We are committed to innovation and
exceptional customer service
for our
students, faculty and staff
both on campus and across the state”