

ZACHRY 133-134 Radiation Teaching Laboratory Area Safety Briefing

September 1, 2009

Contact Information

- ZACH 133-134 Lab Space Licensee
 - Dr. William Charlton
 - wcharlton@tamu.edu
- NUEN Safety Officer
 - Amy Caldwell (acting)
 - amy@tamu.edu

ZACH 133-134 Safety Hazards

- 133A – Neutron Detection and Counting Lab
 - Exposed lead
 - Pressurized gas tubes for neutron detection
 - High-voltage power supplies
- 133B – Alpha/Beta Spectroscopy Laboratory
 - Exposed lead
 - Pneumatic system with air pump (noise hazard)
 - High-voltage power supplies

ZACH 133-134 Safety Hazards

- 133C – Gamma Spectroscopy Laboratory
 - Exposed lead
 - Liquid nitrogen hazard
 - High-voltage power supplies
 - Radioactive Sources in Storage Cabinet
 - Check sources: α , β , and γ sources
 - Special nuclear material: thorium, uranium, plutonium

ZACH 133-134 Safety Hazards

- 134C – Radiochemistry Wet Laboratory
 - Corrosive liquids (exterior shower)
 - Dangerous inhalants
 - Placement of hazardous liquids
 - Handle non-sealed radioactive sources in fume hoods
 - Eye-wash station located inside
 - Chemical shower located in hallway outside 134C
- Fire extinguisher location
 - In hallway, across from 133B

ZACH 133-134 Post Operation

- Be courteous and respectful of equipment and others
 - After equipment use, replace all hardware and leave the laboratory in the same state it was found
 - Storage areas in three labs are labeled, place items in appropriate locations
 - Turn off all powered systems per instructors' instructions
 - Before leaving laboratories, ensure doors are locked and the lights are off

ZACH 133-134 Post Operation

- If unsure of closing operations, ask escort or contacts listed on doors
- Check hands and feet at probe near exterior door if you worked with any unsealed sources
 - Sealed sources are leak tested by NE/RSO every 6 months
- Students can check out equipment/sources for use outside the labs
 - MUST contact lab licensee, Dr. Charlton

ZACH 133-134 – Post Operation Contamination Surveys

- New for this semester
- At conclusion of any lab use, perform swipe(s) of area
- Count swipe and blank swipe on pancake probe in 133B
- Record data in log book
- If swipe count is 3x more than blank, notify escort or contact NUEN safety officer or lab licensee

ZACH 133-134 Student Access

- Limited access shall be maintained in the laboratory area
 - no students are allowed unescorted access to this area unless they have an office/laboratory in this area or are student workers for the department
- During laboratories and classes held in the 133 area, the students must be escorted at all times by the professor/TA or student workers

ZACH 133-134 Student Access

- To gain unescorted access, students must receive university-standard radiation safety training and site-specific training from license holder
- If you do not recognize someone who is unescorted, report to professor/TA in area or respectfully request their business