CHAS on the Road

Introduction to the ACS Division of Chemical Health and Safety

*Presenter Name*
What is chemical health and safety (CH&S)?

- Safety problems get you injured.
- Health problems make you ill.
- Chemical health & safety: Preventing injury and illness from:
  - Toxicity
  - Flammability
  - Corrosivity
  - Reactivity
  - Physical hazards from chemicals, equipment, and processes.
Why do you care about CH&S?

• Everybody
  – Protects public health & the environment.

• Industry
  – Shapes much industrial chemistry and chemical engineering.

• Education
  – Is valuable knowledge essential for all chemistry graduates.

• Outreach
  – Assesses and controls risks in demonstrations.
The force of the explosion sheared the hinges and propelled both chamber doors outward. The loading (south) door came to rest approximately 15 feet away, after colliding with and damaging a steel column. The unloading (north) door came to rest approximately 75 feet from the chamber after striking and fracturing the south wall of the building (see Figure 12). The pressure flexed the entire chamber structure outward, leaving it permanently disfigured (Figure 13).

7.2 Engineering Controls

According to AIChE’s Center for Chemical Process Safety (CCPS), process safety starts with the basic process design and includes control systems, alarms and interlocks, safety shutdown systems, response

CSB estimates that the doors each weigh in excess of 4,000 pounds.
Incident: Texas Tech U, 2010

Photo courtesy Texas Tech Univ.
Incident: Rainbow Flame Demonstration, 2014

Never perform this demonstration this way. https://www.youtube.com/watch?v=3LruNzgA8Xw, accessed 2021-07-11.
Professionalism, Safety, and Ethics

• We support and promote the safe, ethical, responsible, and sustainable practice of chemistry coupled with professional and inclusive behavior and technical competence. We recognize a responsibility to safeguard the health of the planet and the people who live on it, through chemical stewardship.

https://www.acs.org/content/acs/en/about/strategicplan.html
Diversity, Equity, Inclusion, and Respect

• Diversity: Engaging variable perspectives.
• Equity: Ensuring fair treatment.
• Inclusion: Inviting participation from all.
• Respect: Treat people ethically.

Adapted from Ford Foundation Center for Social Justice: www.fordfoundation.org/about/people/diversity-equity-and-inclusion
Division of Chemical Health and Safety (CHAS)

Vision

• Improving people’s lives through the power of best chemical health and safety practices.

Mission

• The ACS Division of Chemical Health and Safety provides authoritative technical resources and mentorship in chemical health and safety for all.

https://dchas.org/
Committee on Chemical Safety (CCS)

Mission
• CCS provides collaborative leadership and resources to advance chemical safety.

Vision
• A scientific community that embraces safety in all activities of the chemistry enterprise.

Goals
• **Goal 1**: Foster collaborative partnerships to **advance safe chemistry**.
• **Goal 2**: Create and compile chemical safety resources that are current, well-managed and authoritative.
• **Goal 3**: Ensure effective dissemination of high quality chemical safety resources.

https://www.acs.org/content/acs/en/about/governance/committees/chemical-safety.html
https://institute.acs.org/lab-safety.html

• Your one-stop shop for safety information!
• Part of the ACS Institute

Explore Additional Lab Safety Resources

Multimedia resources and reading materials for teachers, students, researchers and professionals. Learn how to improve safety and minimize risk in chemical laboratories.

VIDEO
Safety Mindset
How can students work more safely in the lab? The ACS Safety series describes how students and teachers can practice safety in academic labs.

VIDEO
Why Should We Do Laboratory Risk Assessments?
Learn about why and how Risk Assessments are an important habit to develop in the research lab.

VIDEO
Working in the lab alone?
Explore the many safety requirements and scenarios you may encounter when working in a chemistry lab by yourself.

JOURNAL
ACS Chemical Health & Safety
ACS Chemical Health & Safety is a global platform for ensuring that all members of the chemical enterprise receive access to new research, safety information, regulatory updates, effective chemical hygiene practices, and hazard assessment tools.

EBOOK
The chapter “Communicating Safety Information” in the ACS Guide to Scholarly Communication
How can students work safer in labs? The ACS Chemical Laboratory Safety series describes how students and teachers can practice safety in academic labs. Download the book now.
What can we do for you?

• CHAS Chats and webinars
• NEW chemical safety course for students: “Foundations of Chemical Safety and Risk Management for Chemistry Students.”
  – https://institute.acs.org/safety
  – Free for everyone
• Workshops (now offered remotely!)
• Presentations at national, regional meetings; Green Chemistry & Engineering Conference; and local sections!

https://dchas.org/
Join CHAS!

• Membership benefits include access to the DCHAS e-mail listserv.
• Support Division activities
  – CHAS Chats
  – CHAS programming at National Meetings
  – Special CHAS projects with CCS and the ACS Safety Office
• [https://home.acs.org/forms/s/technical-divisions?sc=1234](https://home.acs.org/forms/s/technical-divisions?sc=1234)
• Current dues are $12/yr
Questions?

Presenter name and contact information goes here