

Overview of Texas tech Accident...



Why it happened?

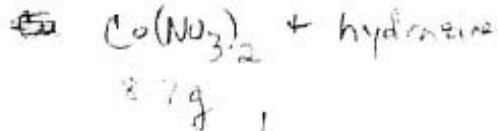
-Main reason

complacent attitude towards safety

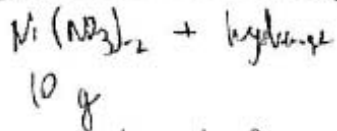
-Violations

They did *not*,

- label bottles properly
- Perform hazard determination of chemicals
- Prepare written procedures for materials that they use



↓
Co hydrazinate sulfate
peach orange color ppt.
exothermic

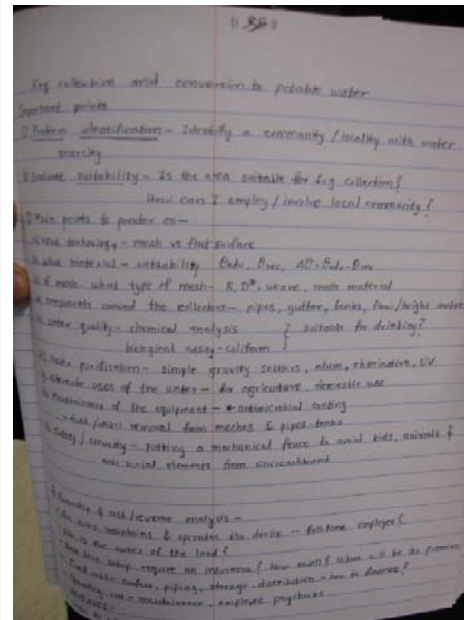


purple ppt forms immediately
also an exothermic rxn.

13-14

- No detail about what exactly the students were doing in the lab
- Vague descriptions of experimental work
- One apparent synthesis on the left shows an undated document with abbreviated description

Good example
Shree's Lab note



- According to the Chemical Hygiene Plan, it is mandatory to prepare written procedures for OSHA-regulated substances and specifically hazardous materials such as carcinogens but there is no strict regulations on other materials

Why it is good to keep track of your research in written form?

■ **safety purpose**

■ to provide yourself with a record of why experiments were initiated and how they are performed

■ to encourage sound thinking

-gives you a forum to talk to yourself, ask questions and to jot down important thoughts and comments about design and result interpretation

■ to provide information to a person who is interested in continuing your project

■ to get rich

-suppose you want to patent a process or contraption but you might stumble onto something important and in such an event you much have a notebook that supports your claims.

Case Study: Professor accused of fabricating paper

■ A standing fact-finding committee associated with the nation's top university said the paper, titled "Enhanced mobility of confined polymers," by engineering Prof. Shin in 2007 was confirmed to have been written based on groundless data

■ The paper was published by Nature Materials, a monthly multi-disciplinary journal that covers a range of topics within materials science from materials engineering to structural materials.

■ "We've conducted two experiments in accordance with the paper, but were unable to obtain the identical result," a committee spokesman said. "In addition, the professor **had no original data that proves his paper's credibility.**"

□ Before judging whether he forged his result or not, scientist may induce wrong conclusion with mislead design of the experiment. However, **it is his personal lab notebook and written data that later on proves this.**