

Pyridinium Tribromide Accident

Situation: EHS received word of an exposure to pyridinium tribromide through the submission of a worker's compensation notice of accident form. An investigation was conducted.

An employee was working in an organic chemistry teaching lab. This employee and another employee were cleaning paper towels of pyridinium tribromide (reagent) using water inside the fume hood. The water and pyridinium tribromide reacted creating bromine gas. The employee was exposed to bromine gas when the other employee removed the containers from the hood and handed them to them. The employee was not wearing goggles and experienced eye irritation due to the bromine gas. The employee immediately washed their eyes at the eyewash station and then sought medical attention.

Causes: A chemical reaction that was off-gassing hazardous vapors was removed from the fume hood.

The lab staff were trying to clean paper towels from the process of de-clumping the reagent. They then washed the paper towels with water causing the reaction.

The lab staff wished to dispose of the paper towels in general waste and therefore tried to remove the hazardous chemicals from the paper towels.

PPE was not used because the staff were complacent. Additionally, despite being required in the lab, PPE was not used because there was no enforcement of the policy.

No formal written standard operating procedure for this process.

Corrective Actions: Create a written procedure for the preparation of chemicals in labs.

Perform formal hazard assessments.

Create a chemical hygiene plan.

Prevention: Update the written procedures as processes change.

Enforce the PPE policy.

Train staff in procedures and PPE use.

Reference: UNM *Chemical Hygiene Plan*