Environment, Health and Safety Hazard Alert

UNIVERSITY OF CALGARY

Title: Chemical Splash in Eye	Audience: Lab PIs & personnel

Incident Summary:

A student performed a larger-scale experiment with a corrosive, pyrophoric reagent in a fume hood. The reagent was added to the reaction flask by a small syringe and needle requiring approx. 40 transfers. During a transfer, the reagent sprayed out from the connection between the syringe and needle into the student's eyes. The student used the eyewash station to rinse their eyes. Medical aid was provided by eye specialists. Lab personnel assisted in safely terminating the student's experiment.

Investigation Findings:

- Experimental setup was not appropriate for this larger-scale experiment.
- Student was not sufficiently trained and competent to perform the task without supervision.
- Student did not wear the required Personal Protective Equipment (PPE) for the task.
- Fume hood had no sash stop installed and was opened beyond the maximum safe working height eliminating it as engineering control against chemical exposure.
- A written Standard Operating Procedure (SOP) was not available for the task.

Actions Taken:

- Prepare SOP for working with pyrophoric reagents and scale-up of such experiments.
- Reinforce PPE requirements with lab personnel.
- Review fume hood practices as described in UCalgary Laboratory Fume Hood User Standard.
- Submit Archibus work request to have sash stop installed at fume hood.

Key Takeaways:

- Wear all required PPE for tasks as identified in Hazard Assessment and Control Form and SOP.
- Principal Investigators must ensure adequate training and competency of lab personnel for tasks.
- University and lab-specific procedures for tasks must be followed.

Resources:

- UCalgary Standard Operating Procedure Standard and Template
- UCalgary Laboratory Fume Hood User Standard