Environment, Health and Safety Hazard Alert

UNIVERSITY OF CALGARY

Title: Fire in waste container	Audience: Laboratory PIs and Personnel

Incident Summary:

A Kimwipe was used to wipe up one or two drops of 50% hydrogen peroxide (H_2O_2). The wipe was put aside and then dampened with water, prior to being disposed of as chemically contaminated solid waste. It is believed trace amounts of 50% H_2O_2, a strong oxidizer, ignited combustible materials within the waste container, resulting in a fire. A fire extinguisher was deployed and Calgary Fire Department attended.

Investigation Findings:

- Hydrogen peroxide (≥50%) thermally decomposes, creating a combustion hazard
- No SOP in place for H_2O_2 handling and disposal
- Potential for trace amounts of incompatible materials within waste container

Actions Taken:

- SOP developed for H_2O_2 handling and disposal
- Review of Laboratory Safety Program standards for chemical waste handling is underway

Key Takeaways:

- SOPs, with SDS review, help ensure safe and appropriate handling and disposal measures are in place when working with hazardous materials
- Even in trace amounts, incompatible materials may react

Resources:

- Lab Safety Manual - Chemical Storage Guidelines & Supplemental Information
- Hazardous Materials Disposal Manual
- Standard Operating Procedure Standard and Template