



SAFETY ALERT

Oil Bath Incident

RISK MANAGEMENT & SAFETY

Date: June 2017
Category: Chemical Safety
RMS Contact: Adam Kratt, akratt@nd.edu

Contact RMS:

Tel: 1-5037

Description

On June 6th an oil bath containing silicone oil overheated creating enough smoke to set off the smoke detectors requiring a building evacuation. There were no injuries or physical damage.

Findings

- Silicone oil was used in the bath
- For this desorption, oil temperature was to be maintained at 80 °C
- The oil bath was used to remove carbon dioxide from an ammonium salt.
- PPE was not worn during the setup of the process or when shutting it down after the alarm was set off
- The process was left unattended with no “Unattended Operation” sign on the door
- Thermocouple cord was found to be damaged at least 1 month prior to use.
- The thermocouple used to regulate the hotplate was damaged.

Root Causes

- There was no procedure to remove damaged items from service.
- There is no procedure to replace, repair and/or calibrate equipment after it has been identified as damaged.

Corrective Actions

- Communicate with lab personnel the need to inspect equipment for defects before use.
- Communicate with lab personnel the need to replace, repair and/or calibrate damaged equipment when discovered.
- Communicate with lab personnel proper “unattended operation” procedures.