



SAFETY ALERT

Oil Bath Fire

RISK MANAGEMENT & SAFETY

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Category: Oil Bath Fire
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Contact RMS:

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Description:

Mineral oil caught fire while a Post-doctoral researcher was heating a round bottom flask with about 1 gram of denanol and propylamine in the oil bath. The researcher put the fire out with a fire extinguisher.



Photo 1. Oil bath that burned.

Findings:

- Researcher was performing a coupling reaction (denanol and propylamine) over mineral bath.
- Reaction was setup in a hood.
- Researcher was checking temperature of bath every 10 minutes to ensure it was steady at 550C.
- Researcher was wearing gloves, eye protection and lab coat.
- Researcher's lab safety and fire extinguisher training was current.
- Oil bath caught on fire. See Photo 1.
- Researcher used fire extinguisher to put out fire.
- Fire extinguisher was current with inspections.
- There were no injuries.

Root Cause:

- Used oil reached its flash point and the vapors ignited upon contact with the hotplate.

Recommended Actions:

- Establish firm guidelines on changing out discolored, old or contaminated oil and train personnel.