

LESSONS TO BE LEARNED

Generated from Actual Incidents-Written by EHSO

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Type of Incident: Broken Mercury Thermometer

What Happened: A lab worker was using a mercury thermometer to monitor the temperature of a water bath. The thermometer broke. The worker did not see mercury leak into the water. She was not sure what to do, so she called Environmental Health and Safety's emergency line, 6-SAFE. Mercury is highly toxic and is volatile at or above room temperature. EHSO staff reported to the scene to analyze for mercury vapors. Fortunately, there were no mercury vapors detected. The mercury was siphoned off the water into a jar with screw-top lid. The thermometer was placed in a zip-lock bag. Both were collected for disposal as hazardous waste.

Immediate Cause: The water bath was too crowded, creating pressure against the thermometer causing it to break.

Root Causes: Failure to replace mercury thermometer with less toxic thermometer.

Corrective Actions:

1. All lab personnel must complete lab safety and hazardous waste management training annually. Web-based training is available through the EHSO website www.uic.edu/depts/envh.
2. An appropriate chemical spill kit must be available in case of incidental spills. An ideal mercury spill kit should include: index cards, absorbent mercury sponges, and/or pipettes/syringes, zip-lock bags.
3. Replace mercury thermometers with safer alternatives-such as mineral spirit filled-, alcohol based-, digital, and microprocessor based- thermometers. As a last resort, use a Teflon-coated mercury thermometer that helps contain spills upon breakage.

Note: It is costly to you to dispose of mercury-contaminated waste. EHSO provides free mercury thermometer disposal.

