

Lessons Learned

Brief Summary:

A researcher was transferring an open vial to their fume hood and it fell, resulting in the contents splashing the researcher, their co-worker, the front of the fume hood, and onto the floor.

What Happened:

As a researcher was transferring a vial containing approximately 7mL of 3 M sulfuric acid to their fume hood, the vial fell. Several droplets of sulfuric acid splashed onto the front and sleeve of the lab coat of the individual carrying the vial, and the side of the lab coat and shoe of a second lab member who was standing nearby. The front of the fume hood and floor were also splashed by the liquid as the vial fell.

Both lab members immediately removed the contaminated lab coats and gloves, washed their hands and arms with water for approximately 15 minutes. They continued to monitor any potentially impacted areas of skin and did not experience any symptoms of exposure. Both lab members were wearing safety goggles at the time of the incident.

The contaminated shoe and lab coats were also washed with water. The contaminated lab coats were replaced with clean coats. The spilled acid on the floor and on the hood was neutralized with sodium bicarbonate and then cleaned with water. The lab also had an acid spill kit

of sodium bicarbonate as a neutralizer.

Waste from the cleanup and contaminated lab coats were submitted to EHS for disposal. The lab members reported to their group Safety Officer, who filed the incident report with EHS.

The lab group has determined they will keep vials and other containers closed when transferring them in the future.

What Went Right:

- Proper PPE was being worn at the time of the incident. Including wearing impervious shoes that protected the foot from the spill.
- Lab members took the appropriate steps to decontaminate themselves.
- Lab members were knowledgeable of the material spilled and how to neutralize it.
- Lab members were thorough in their review of the incident and development of corrective actions.



Moving chemicals within the lab

Lessons Learned:

This incident highlights quite a few areas where the right things were in place and being done to prevent harmful situations:

Wearing the appropriate PPE at all times can protect you even if you are not the person handling the materials.

Knowing the hazards of the materials you and your lab-mates are using can be beneficial to a quick response to incidents.

Having a spill kit or other method of neutralizing/containing a spill available makes for easier recovery from the incident.

Reporting the incidents quickly to capture everyone's review and best input toward corrective actions to prevent future incidents.

A few reminders:

Document your lab's expectations for PPE using the PPE Hazard Assessment form and upload to SAM.

Document hazards, mitigation steps, emergency procedures, and waste disposal methods in Standard Operating Procedures and upload to SAM.

Finally, make sure everyone in the lab is aware of the hazards present, so even if they aren't directly handling the materials, they can be prepared and respond to an incident.

Resources

[Responding to Incidental Chemical Spills](https://utah.bridgeapp.com/learner/courses/4019d6d3/enroll)
<https://utah.bridgeapp.com/learner/courses/4019d6d3/enroll>

[OSHA Occupational Chemical Database](https://www.osha.gov/chemicaldata/index.html)
<https://www.osha.gov/chemicaldata/index.html>

[SULFURIC ACID](https://www.osha.gov/chemicaldata/chemResult.html?RecNo=624)
<https://www.osha.gov/chemicaldata/chemResult.html?RecNo=624>

If you have additional questions, please contact EHS at 801-581-6590