

Hello Everyone,

At the start of the new academic year, I would like to share with you the safety incidents/near misses that occurred in FRNY and were reported over the summer, from June 2015 to date.

1. June 16, 2015: Potential skin contact with tetrahydrofuran

Description: While a student was transferring tetrahydrofuran (THF) from a container to a funnel, about 5 mL of solvent spilled on one of his chemical protective gloves.

Action: Gloves were removed promptly and the student rinsed his hands thoroughly. The student visited PUSH for medical attention; no action was needed and the students returned to work after that.

Recommendations: Be careful when transferring chemicals and use appropriate PPE for the task you are performing. Choose your chemical protective gloves according to the recommendations in the SDS and manufacturer recommendations. You can also consult the safety gloves selection guide posted on the ChE safety website (<https://engineering.purdue.edu/ChE/AboutUs/Safety.html>) under the **Laboratory Safety Requirements** section.

2. June 22, 2015: Nitrogen vented in the lab due to loose connection of tubing

Description: After turning on alternate nitrogen supply to a glove box, a researcher heard a venting noise coming from the tubing.

Action: The researcher turned off the gas supply, identified the origin of the vent (tubing not connected to 3-way valve) and reconnected the tubing to the original position. The incident details were shared with the group.

Recommendations: Perform regular (daily) checks on the lab equipment and gas tubing and make sure the fittings and tubing are properly attached and connections are tight.

3. July 10, 2015: Exposure to nitric acid vapor

Description: A researcher was cleaning empty containers of nitric acid stored in the acid cabinet below the fume hood, to dispose of them. The researcher assumed that the container was previously vented. On opening the container, the researcher was exposed to the nitric acid vapors trapped inside the container and immediately felt a burning sensation at the back of his mouth and throat.

Action: (1) The researcher immediately rinsed his mouth repeatedly with plenty of water and left the lab to walk outside, in fresh air. (2) The incident was discussed in a group meeting. (3) As the burning sensation persisted for longer time, the researcher sought medical attention.

Recommendations: (1) never assume a container is empty, even when this appear to be true. (2) Open containers of hazardous chemicals only in the fume hood, pointing the neck of the container away from face. (3) Always wear the recommended PPE for the task you perform in the lab.

4. July 24, 2015: Lacerated finger during transport of a filled liquid nitrogen (LN₂) tank

Description: Two students were transporting a recently filled LN₂ tank and while the cart was pushed over a curb edge, the LN₂ tank began to fall. One of the students tried to stop the tank from falling and his left little finger was cut (small laceration).

Action: (1) The tank was brought to upright position, returned to lab and inspected for mechanical integrity. The tank was put out of commission due to dent identified on the vacuum jacket. (2) The student washed hands and the affected area thoroughly, and applied a band-aid and ice to the wound. The incident details were shared with the group and discussed in a group meeting.

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Recommendations: (1) Never attempt to stop a falling object, including heavy and bulky objects such as gas cylinders or LN₂ tanks. (2) Always wear appropriate PPE (use heavy duty worker gloves) when transporting big objects (such as compressed gas cylinders and LN₂ tanks), and plan your route carefully in advance. (3) For transporting heavy objects from outside into the building, please consider using the platform on the loading dock when the ramp leading to the FRNY entrance facing Physics building is not safe to use. This is recommended especially during the winter, for situations when the surface of the ramp can be icy and slippery due to recent snow fall.

I hope that sharing these incidents with you will help prevent similar events from happening in our School!

Sincerely,

Gabriela
On behalf of the ChE Safety Committee