Date: 29/02/2024

Lessons learned:

Fire in Bin due to Pyrophoric Material

What happened?

During the transfer of an organometallic reagent into an inert gas-filled reaction flask, the designated syringe was accidentally thrown to the bin without purging.

The laboratory and fume hood were crowded with labware, wash bottles and waste with very little workspace left for work.

What went wrong?

The remains of the pyrophoric material in the syringe initiated a fire in the trash bin. The bin had tissue paper waste inside.

A step in the standard operating procedure was skipped.

The workspace was crowded and cluttered.

What went right?

The researcher read all relevant SDSs.

The researcher was wearing complete PPE.

The researcher did not work alone: there was an additional student in the lab.

The researcher and an additional student immediately took the bin outside the lab and extinguished the fire using a fire extinguisher.

How to prevent similar incidents in the future?

Follow the Standard Operating Procedure (SOP).

Always work in an organized workspace to reduce distraction.

Make sure all mitigating equipment – such as the correct fire extinguisher in this case – is on standby.