



Lessons learned:

An Acetonitrile Eye Splash

What happened?

In a reflux reaction of acetonitrile, while the main medium was heated to 80°C, the type of routine condenser used in this reaction was changed from a Graham condenser (spiral shape) to an Allinh condenser (bubble shaped). While approaching to take a sample from the reaction with a Pasteur pipette, the condenser spontaneously disconnected from the system, and the reaction medium shot out onto the researcher's forehead, reaching his eye. The researcher immediately washed his eye using the eyewasher and turned to seeking medical assistance.

What went wrong?

A small change in tools while performing the reaction led to an incorrect engineering design of the system. The heat removal of the Allinh condenser was not sufficient > pressure was built in the reaction glassware.

What went right?

The researcher read all relevant SDSs.

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The researcher was wearing complete PPE.

The process was performed inside a fume hood.

The researcher immediately washed his eye and sought medical help.

) How to prevent similar incidents in the future?

Any alteration in a routine procedure calls for application of any sort of risk assessment methodology, especially since the new procedure will necessitate some procedural adjustments. Consult all literature and relevant personnel, specifically the PI and a relevant safety officer. Special attention should be applied to any failure modes possible in the updated procedure scheme.