

OVERVIEW

Nitric acid, Trace Metal Grade (HNO_3) is colorless, fuming, oxidizer and highly corrosive. It is a common laboratory reagent, and an important industrial chemical for the manufacture of fertilizer and explosives.

POTENTIAL HAZARDS



WHAT HAPPENED?

NITRIC ACID CONTAINER FAILURE NOTICE

In the spring of 2022, the handle of a concentrated nitric acid trace metal grade in plastic container fell off while a researcher was moving the container. This resulted in nitric acid spilling onto the floor. Noticed: The 70% Nitric Acid in plastic container (High Density Polyethylene, HDPE) had passed its expiration. No injuries because PPE was worn properly.

WHAT WENT RIGHT?

- ✚ The correct PPE was worn; therefore, there was no injury to the person.
- ✚ Reported the accident in a timely manner.

WHAT CORRECTIVE ACTIONS WERE TAKEN?

- ✚ Review the inventory for this acid. If the expiration date has passed, immediately discontinue use, attach a hazardous waste label, carefully place it in secondary containment in SAA, and submit a Hazardous waste pickup form.

HOW CAN INCIDENTS LIKE THIS BE PREVENTED?

- ✚ **Chemical Inventory:** Maintain accurate chemical inventories of all chemicals and routinely check for expiration dates.
- ✚ **Editing the Hazard Assessment:** Adding 70% Nitric Acid as a separate risk category in the risk assessment. The expiration date on Trace Metal Grade Nitric Acid is set to two years by the manufacturer to ensure the integrity of the bottle is maintained and is still safe to use.
- ✚ **Training:** Lab personnel training is a key to preventing injuries and for emergency procedures.
- ✚ **Enforcing PPE Use:** Personal protective equipment does not eliminate a hazard, but it is the only thing that protects a person from injury in this type of situation.
- ✚ **Working Alone Policy:** Create and review your work alone procedures with your staff, especially when hazardous chemicals are involved.