

CLOSE ENCOUNTERS OF THE LAB KIND

THE SANTAYANA REPORT

George Santayana was a Spanish-American philosopher, essayist, poet, and novelist. In 1905, he penned the famous aphorism “those who cannot remember the past are condemned to repeat it.” More than a century later, the saying reverberates with professionals the world over. The following is a summary of a recent incident at Columbia University. The information presented is intended to provide awareness and help readers plan against the occurrence of a similar situation in their laboratory or work area.

All Mixed Up

A recent incident at a research institution in upstate New York resulted in laceration injuries to three research personnel when a glass bottle containing a mixture of acetone, ethanol, and nitric acid ruptured with projectile force. According to interviews following the incident, waste acetone and ethanol were collected in the bottle as an intermediate step, with the final intent of a second transfer into a hazardous waste container designated for the disposal of organic solvents, before allowing the bottle to air dry for reuse. However, concentrated nitric acid was added to the bottle by another lab member and securely capped before the acetone and ethanol were properly disposed of. After a few minutes, a lab member noted a hissing sound from the bottle and as they approached the bottle to adjust the cap, the inadvertent chemical reaction between the constituents caused the bottle to violently rupture.

Lessons Learned

- Always follow recommended policies, procedures, or protocols for handling hazardous materials safely to conclusion when working with any chemical in the laboratory.
- Clear hazard communication is critical to a safe laboratory environment, especially when hazardous materials are transferred outside of their original container. In this instance, it was unclear how the containers in question were labeled. Please see the EH&S [website](#) for more information on how to safely label your laboratory containers at Columbia University.

For further information on this or any other safety related matter, please contact the [EH&S office](#).