

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.

Keep Your Storage Up

Recently, a spill occurred in the storage cabinet of a Columbia University laboratory after a laboratory staff placed a 2-liter formalin bottle on its side in the cabinet under the chemical fume hood. The lab member, when placing the bottle back into the cabinet after use, did not properly close the lid and a large amount of formalin leaked inside the cabinet. When another lab member later opened the cabinet, they were exposed to formaldehyde fumes that had accumulated inside. They suffered irritation of their eyes due to exposure from the formalin vapor, and reported to Workforce Health and Safety for treatment. EH&S was contacted to clean up the spill, and once all liquid and vapors were eliminated, the laboratory was cleared for re-entry.

An important component of a safe laboratory environment is proper chemical storage. This is accomplished through correct chemical segregation, the use of secondary containment and designated hazard-specific storage cabinets where necessary, and the use of sturdy shelving in all storage areas. Chemical storage cabinets are often provided under a laboratory's chemical fume hood. While these cabinets are designated for chemical storage, it is important that containers are properly maintained within and that the chemicals are compatible with the cabinet, including by their size. If a larger container cannot be stored in the cabinet such that it allows for easy stowing and retrieval, a more suitable location must be found. Chemical bottles should never be stacked or forced into a cabinet in unstable or leak-prone positions.

The following Lessons Learned are useful reminders in order to prevent incidents like the one detailed above from occurring in your storage cabinet.

Lessons Learned:

- Store all containers upright. Containers should never be stored on their side.
- When storing liquids (especially hazardous liquids) ensure that container lids are tightly closed.
- If necessary, adjust shelving height to accommodate upright container storage in cabinets, purchase smaller containers, or locate a storage area that can accommodate the container size.
- DO NOT allow leaking containers to remain in Satellite Accumulation Areas (SAAs) for Hazardous Waste, or any storage area. Contact EH&S upon discovering a leak. Please refer to the 5 Ls of Hazardous Waste Management link:

https://research.columbia.edu/sites/default/files/content/EHS/Waste_Hazmat/5Ls.pdf

For further information, or to view previous Santayana Reports, please visit EH&S' [lessons learned website](#). For any other safety related matter, please contact [EH&S](#).

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June 2018

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