

FDN(wh)Y Me?

As an aid to laboratories in avoiding FDNY Violation Orders (VO) and Summonses (SUM), EH&S distributes summaries of FDNY inspection findings which resulted in a VO or SUM to an actual laboratory on either the Morningside or Medical Center campus. These real-life scenarios are meant to assist the research community in ensuring that such conditions do not exist in Columbia University laboratories.

February, 2023 - Storage of Hazardous Materials

Each week, during regular inspections of Columbia University laboratories, the FDNY Fire Inspector performs a walk-through of selected laboratory spaces to ensure compliance with the NYC Fire code. Improper storage and segregation of hazardous materials is one of the most common observations noted by the inspector. Maintaining proper storage and segregation is an important measure that contributes to a safe working environments in research laboratories.

General storage requirements:

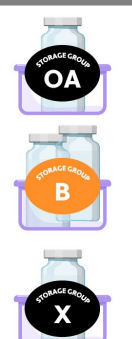
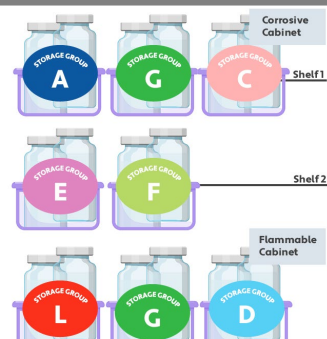
- ❖ Hazardous materials should be stored at or below eye level. Chemicals should never be stored on high shelves or on top of the cabinets or refrigerators.
- ❖ Store chemicals and hazardous waste away from windows as exposure to direct sunlight may result in reactivity.
- ❖ Chemicals that require refrigeration must be stored in a rated, flammable storage refrigerator, never in a general use refrigerator that has a “Store no Flammables Flashing below 100° F” sticker attached to it.
- ❖ All chemical containers must have a label indicating their contents. Names of chemicals should be written in full in English, no chemical formulas, no abbreviations.
- ❖ Chemical fume hoods should never be used as permanent storage for chemicals as clutter reduces the available work space and can interfere with proper airflow.
- ❖ Maintain the storage of flammable liquids below the Maximum Allowable Quantity (MAQ) set by the FDNY permit for the laboratory space. Contact labsafety@columbia.edu if unsure of the lab’s permit limit.
- ❖ Cabinets located under sinks should never be used for storage of hazardous materials.
- ❖ Glass containers stored on the floor must be placed inside of a secondary container.
- ❖ Corrosive substances should never be stored on metal shelves. If the cabinet designated for corrosive materials has metal shelves, secondary containment should be used.
- ❖ Incompatible chemicals should always be stored separately, the table below outlines different storage groups and the requirements for their storage.

As always, please contact EH&S at labsafety@columbia.edu for any questions or guidance regarding proper storage of hazardous materials. Please note, the FDNY Laboratory Inspection Unit is on-site weekly at the Morningside and Irving Medical Center campuses. For a consultation before the FDNY inspector gets around to your lab, or for any question, concern, or help, please get in touch with an EH&S Safety Advisor today!

<https://research.columbia.edu/safety-advisor-team>

References:

1. <https://www.clinicallab.com/trends/lab-safety/preventing-chemical-accidents-in-the-clinical-lab-25941>

STORAGE GROUPS LEGEND	CLASS REQUIRING SEPARATE CABINETS CUPBOARDS	RECOMMENDED STORAGE SCHEME FOR CHEMICAL CLASSES THAT CAN BE STORED TOGETHER. EACH CLASS IS IN SECONDARY CONTAINMENT!
A - Organic Bases		
B - Pyrophoric and water reactive materials		
C - Inorganic Bases		
D - Organic Acids		
E - Oxidizers		
F - Inorganic Acids not including oxidizers or combustibles		
G - Compatible with anything		
K - Explosives or other highly unstable materials		
L - Non-reactive flammables and combustibles		
OA - Oxidizing Acids		
X - Organic Peroxides		