

SCHOOL SCIENCE LABORATORY STORAGE AND INVENTORY PROCEDURES - GENERAL PRACTICE GUIDELINES

NOTE: Always consult your local fire code and state regulations for more specific requirements.

INCOMPATIBLE MATERIALS

Incompatible materials shall be separated. When the stored materials are in containers having a capacity of more than 5 pounds or ½ gallon separation shall be accomplished by:

- segregate incompatible materials storage by a distance of not less than 20 feet,
- isolate incompatible materials storage by a noncombustible partition extending not less than 18 inches above and to the sides of material,
- store liquid and solid materials in hazardous materials storage cabinets, or
- store compressed gases in gas cabinets or exhausted enclosures.

Materials which are incompatible shall not be stored within the same cabinet or exhausted enclosure.

Smaller quantities shall also be separated. In these cases separation shall be accomplished by:

- arrange shelves vertically so that incompatible materials are not stored above each other
- arrange shelves horizontally so a physical barrier is between incompatible materials
- use hazardous materials storage cabinets when available

INSPECTING YOUR CHEMICALS

- make sure the container is in good shape
- all containers should be dated on delivery
- make sure the contents of the container are in good shape (crystallized chemicals or chemicals that have rusted or changed color etc, should be disposed of properly)
- make sure the chemical is stored in a proper location (Your Environmental Services group will provide a storage procedure) **NOTE: Older systems provided by some chemical vendors are not acceptable.**

- make sure that the label accurately reflects the contents of the container.
- when mixing chemicals for use, do not prepare more than you will use and always make a label that accurately reflects the content of the solution and the date it was prepared
- chemicals that will not be promptly used should be disposed of properly
- keep an up-to-date written inventory (Everything removed or added it should be noted on your chemical inventory sheet.)

WRITTEN CHEMICAL INVENTORY

- **Chemical Names** listed alphabetically on the hard copy of the chemical inventory. If kept electronically list can be sorted in other useful ways.
- **Quantity** of each stored chemical. Tracking the quantity of chemicals used and stored will aid in ordering new chemicals each year.
- **Location** of stored chemicals – This feature will aid Environmental Services or first responders such as the fire department in assessing emergencies. For most facilities, additional hazard cabinets will be added to permit the proper storage of hazardous chemicals. Facility maps will be updated to show gas shut-off valves and electrical shut-offs. Maps will also indicate the rooms where hazardous materials are stored.
- **Uniform Fire Codes** – Identifies the type of hazard a chemical poses. This aids in the type of extinguishing method used by the fire department in the case of a fire. Examples of UFC codes are Flammable solids (FLS), Combustible Dust (CMD), and Aerosol Class III (AE3). Environmental Services will assist with proper identification.
- **Health Hazards** – Identifies the types of health hazards associated with inventoried chemicals. Examples of health hazards are Irritants (IRR), Corrosives (COR), and Carcinogens (CAR).
- **Ratings** – Chemicals are assigned ratings from 0-4 (zero presenting the lowest hazard) in each of the following categories: Fire hazard, Health hazard, and Reactivity.

HOW TO MAINTAIN A CHEMICAL INVENTORY

- Remove items from the written inventory as they are disposed or used
- Record all new orders
- Record the received date on chemical containers as they are delivered.
- Record the date opened on the container.
- Properly dispose of Chemicals as their shelf life expires.

- Rotate shelf stock. *“First in First Out.”*
- Phase out chemicals that are no longer being used.
- Order smaller quantities...*It may be cheaper to order larger quantities, however it is expensive to dispose of outdated chemicals.*
- Keep the storage areas clean, dust can contaminate chemicals.