

### 3.4 Laboratory Chemical Storage and Inventory

Proper storage of chemicals in laboratories is always a major concern. Chemicals that have been stored improperly could react, forming hazardous products. Sometimes improper storage results only in disorder, but at other times, it has resulted in loss of life and property. Each department is responsible for safely managing chemical supplies and complying with all federal, state and local regulations.

- Chemicals should never be stored en masse by the alphabet as this will automatically introduce chemical incompatible storage situations. Only with the segregation groups can chemicals be stored in alphabetic order.
- If a chemical exhibits more than one hazard, segregate by using the characteristic that exhibits the primary hazard. Sometimes, classes of incompatible materials may be stored in proximate storage with other chemicals if secure secondary containments are used to prevent incompatible reactions. Incompatible chemicals stored near each other are unprotected in the event of fire.
- Always read the label and SDS carefully before storing a chemical. The SDS for most materials lists incompatibilities for that chemical.
- Do not store chemicals near heat sources or in direct sunlight.
- Date chemicals when received and first opened. Always use the old chemicals first which will reduce the amount of chemicals for disposal.
- Keep in mind the expiration dates for chemicals.
- Never use lab benches as permanent storage areas for chemicals.
- Inspect chemicals regularly for any signs of deterioration and for the integrity of the label. Never wait till the chemical becomes unknown. It is against the law to store or use unidentified chemicals in the laboratories or workplace.
- Never store chemicals in glass containers on the floors or on the edge of shelves. All shelves that carry chemicals should have lips (raised edges) to prevent any spillage or overturns.
- Do not use fume hoods as a permanent storage location for the chemicals, with the exception of particularly odorous chemicals that may require ventilation.
- Please contact the department of Environmental Health, Safety & Risk Management at 468-6034 for any disposal of old, outdated or unused chemicals.
- Never store chemicals above the eye level. If there is a leak or breakage, the contents will fall onto your face and upper body.
- Chemicals that need refrigeration must be sealed with tight fitting caps and kept in laboratory safe refrigerators. Do not clutter the refrigerators with stored chemicals.
- Never store flammable liquids in a standard or domestic refrigerator or freezer. They have numerous ignition sources that could ignite vapors.
- Do not store excessive amounts of chemicals in the lab. Unnecessary storage of chemicals is a fire hazard and limits work place. It also increases the waste generated and thus waste disposal costs. The disposal costs of chemicals stored for long time often exceed any cost savings from prolonged or excessive quantity storage.