



During the summer months, indoor temperatures in some campus buildings can become uncomfortably warm and may affect the safe storage and use of laboratory chemicals under certain conditions. In particular, highly volatile solvents with low flash points and boiling points (namely Class 1A flammable liquids) can build up hazardous vapours/fumes or over pressurize bottles/containers. In addition, unintended chemical reactions and chemical instability can occur (e.g. volatile solvents containing pyrophoric materials). Lab supervisors should update their chemical inventories and review the following recommendations as part of safe laboratory planning for the summer months.

Recommendations for handling and storing chemicals during hot weather:

- Where possible avoid using or handling high volatile flammable liquids
- Where possible, substitute out with low volatile flammable liquids
- Ensure the fume hood is used as much as possible for simple tasks (such as dispensing into wash bottles or storing wash bottles while working)
- Reduce the typical amount of high volatile flammable liquids stored and used in the laboratory
- Keep only the minimum amount of high volatile liquid or chemical reagent out while working
- Keep bottles capped and not open for extended periods while working
- Use vented caps to prevent pressure build up of high volatile solvents kept outside of the flammable cabinet (e.g. for active HPLC use)
 - Note: only use vented caps if work area has adequate ventilation
- Relocate temporarily high volatile flammable liquids to alternative cooler storage locations (e.g. fridge or chemical storage room), if available.
- Increase inspections (e.g. a weekly scan) of chemical storage locations to identify
 - Any plastic bottle that may be bulging
 - Defective caps that may leak and cause a stronger than typical odour in storage cabinet (e.g. acid or flammable cabinets)
 - Surplus, expired or damaged chemicals that should be disposed as hazardous waste
- Replace defected bottle/container caps and/or bottles

