Safe Use of Fume Hoods

The health and safety of laboratory personnel and building occupants must be the primary goal of laboratory management. Properly functioning fume hoods help achieve this goal with respect to protecting personnel from the hazards of chemical vapors and other harmful airborne substances. It is important to remember that a fume hood is not a storage area. Keeping equipment and chemicals unnecessarily in the hood may disrupt the flow in the hood and cause hazardous fumes to escape.

Follow these safe work practices to maximize the fume hood's effectiveness:

- Keep fume hood exhaust fans on at all times
- Do not place any equipment in the hood within 15 cm of the opening
- Ensure that large equipment is elevated to allow air to flow smoothly around the equipment (Figure 30)
- Never place your head inside the hood
- Keep the hood sash closed as much as possible at all times to provide as much physical protection as possible and to minimize energy usage
- Keep lab doors and windows closed to ensure negative room pressure relative to the corridor and proper air flow into the hood
- Do not store chemicals in a fume hood used for working (Figure 29)
- Keep the slots of the baffle free of obstruction (Figure 30)
- Do not use the hood as a waste disposal mechanism (e.g. for evaporation of chemicals)
- Avoid rapid movements in front of the hood including quickly walking past the hood, opening and closing the fume hood sash rapidly and swift arm and body movements in front of or inside the hood. These actions may increase turbulence and reduce the effectiveness of fume hood containment
- Do not override or disable mechanical stops on the sash (Figure 29)
- Train and educate employees regarding the specific hazards and include work methods that help reduce contaminant exposure
- Attach a tell-tale to the sash of the hood to see if the air is flowing. This can be as simple as a piece of tissue paper taped to the handle of the sash that hangs over the opening. If it is being pulled in, the air is flowing
- Have a general awareness of the operation of your hood and be aware of any differences in visual or audible cues that may imply a change in function

Figure 29. Unlabeled chemicals stored in working fume hood with sash higher than safe limit

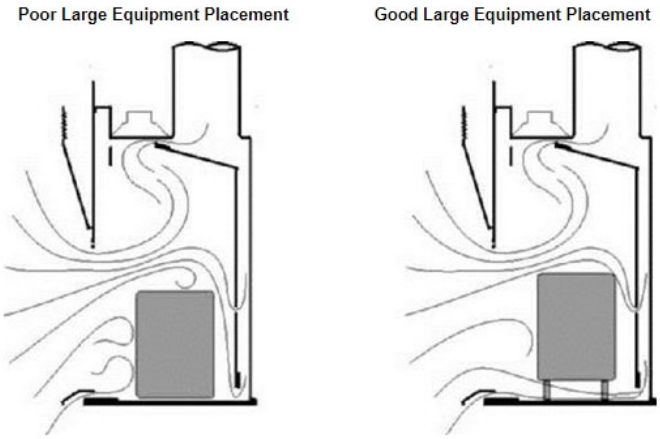

Figure 30. Visualization of air movement with different placements of large equipment

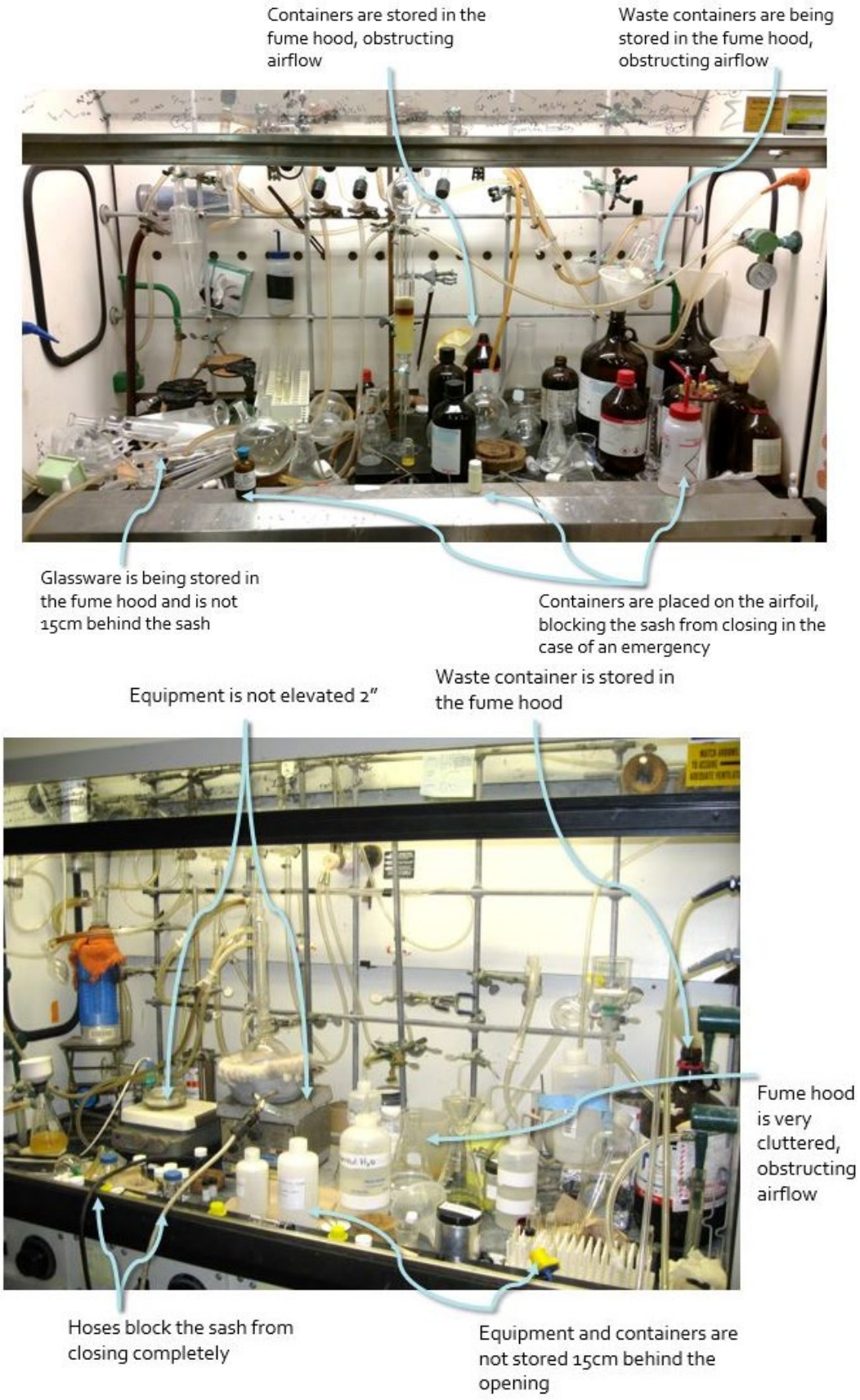

Figure 31. Typical research fume hoods with numerous bad practices