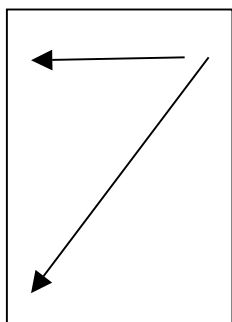


Technique demo

1. Width of their bench space as well as the top of the fume cupboard as their work area, each have access to a sink.
2. Solutions not in use should be kept on top of the hood or behind the metal bars.
3. The right side of the work area can be used to take notes
4. Heating plate should never be used completely under the canopy hood. It is placed a couple of inches from the line since the vapors are still removed.
5. The waste container should be kept next to but not close to the heating plate.
6. The heating plate should always be off when plugged in and unplugged before leaving. The cable should be put in the back out of the way during the experiment. No items should be removed from the hot plate while it is on – it should first be turned off.
7. Never drop a magnetic bar into the beaker while it is on the hot plate. Remove the beaker and carefully place the bar in to avoid breakage. There is **no need** to have the magnetic bar rotate at a speed greater than 3 or 4.
8. The magnetic bar should not be removed after use with the fingers but with the magnetic bar attached to the side of one of the workstations. It can then washed, wiped with tissue and placed back in the drawer.
9. During boiling, a bar or heating chips should be in their solution and the beaker covered with a watch glass except if you need to monitor the temperature. Otherwise **NEVER BOIL UNCOVERED**.
10. To monitor the temperature, attach the thermometer clamp under the hood with the thermometer suspended in the solution – do not touch the sides or bottom of the beaker with the thermometer.
11. The filtration flask with it's tubing is clamped for safety and the tubing can reach the next metal post to do experiments. When doing experiments the filtration flask should not be suspended but fixed on the bench top.
12. The metal post can be adjusted to the convenient distance for their experiment. **NEVER CLAMP TO THE HORIZONTAL BAR**.
13. Also the bar facing forward should be placed in the holder from the top not the bottom so it has no chance of falling.
14. The red (burette) clamp can be removed and placed on top of the hood or turned round to face in the other direction. Also demonstrate how this can be removed and clamped etc.

15. It is not necessary to bend or stoop to check the reading on a measuring cylinder. The measuring cylinder should be held in your hand (up to eyelevel) so that the markings on the cylinder appear as one line (rather than a circle around the thermometer) – an accurate reading can then be taken
16. When using the filtration flask the tube should be placed across the sink rather than diagonally to avoid splashing

Point
Tube
In this
Way



If there is an obstruction in the sink the TA should use tongs to remove the plug and check for the obstruction.

Will Splash

17. The filtration flask – when creating a vacuum, the flask should not have water in it as the water vapor decreases the vacuum. To remove water from the flask, pour in into an empty beaker or waster container and then into the sink.
18. Removing the plug on the filtration flask should be done carefully by holding the plug and not the glass!
19. Chemists should always work with his/her squeeze bottle full of the solvent being used – water for this lab. Never use the bottle upside down, always straight.
20. Water aspirator –The water flows from an area of greater volume into a narrower tube. This increases the pressure and placing the connection tube at the area it narrows pulls a vacuum through.
21. Correctly insert a pipet into a pipet bulb clamping to prevent glass breakage