Buret/Balance Tips

Balance Rules:

1. Tare balance to read 0.000 gm before weighing. Circular plastic windscreens are helpful to obtain a steady reading. If balance only displays to ±0.01 gm, press the tare several times to reset to ±0.001 gm. Masses above ~150 gm will cause this to occur.

2. Never transfer chemicals to containers which are resting on the balance pan. Remove container from balance, add chemicals, then reweigh.

3. Always use the same balance for all weighings, to minimize calibration errors.

4. Clean up any spills immediately.

Buret Technique

1. Check tip and top of buret for chips. Return if damaged. Fill buret with water and check that valve does not leak.

2. Clean buret with soapy water and a buret brush so that no droplets cling to interior when drained. Do not add concentrated dish soap directly to buret.

3. Lower buret so top is below eye level and use a funnel for filling.

4. For titrations, rinse and drain buret twice with 1-2 ml of standardized solution before filling completely with standard to avoid dilution.

5. Open valve fully and drain briefly into a beaker to remove air bubbles from tip.

6. Take initial reading to ±0.01 ml with eye level with bottom of meniscus to avoid parallax error, using a dark surface placed below and behind the meniscus for ease of reading. All readings should be read and recorded to ±0.01 ml, even if they land exactly on a line, (eg. 1.00 ml instead of just 1 ml).

7. Use a sheet of white paper under flask to improve visibility of indicator color change.

8. Titrate carefully, with swirling, so that color change occurs after 1 additional drop. Record final buret volume to 0.01 ml.

9. If in doubt about endpoint, record buret reading, add 1 more drop and observe color again.

10. When finished, drain buret and rinse with water, then inspect for chips. Return to stockroom.