1) % Error = $\dfrac{|\text{measured} - \text{accepted}|}{\text{accepted}} \times 100$

% Error = $\dfrac{|59.6\ \text{g/mol} - 57.9\ \text{g/mol}|}{57.9\ \text{g/mol}} \times 100$ = $\dfrac{1.7}{57.9}$

% Error = 2.9%

2) % Error = $\dfrac{|\text{measured} - \text{accepted}|}{\text{accepted}} \times 100$

% Error = $\dfrac{|31.4\ \text{g/mol} - 32.0\ \text{g/mol}|}{32.0\ \text{g/mol}} \times 100$ = $\dfrac{0.6}{32.0}$

% Error = 2%

3) % Error = $\dfrac{|\text{measured} - \text{accepted}|}{\text{accepted}} \times 100$

% Error = $\dfrac{|30.3\ \text{g/100cm}^3 - 34.7\ \text{g/100cm}^3|}{34.7\ \text{g/100cm}^3} \times 100$ = $\dfrac{4.4}{34.7}$

% Error = 13%

4) % Error = $\frac{|\text{measured - accepted}|}{\text{accepted}}$ x 100

% Error = $\frac{|1.47 \times 10^{-8} - 1.51 \times 10^{-8}|}{1.51 \times 10^{-8}}$ x 100 $= \frac{0.04 \times 10^{-8}}{1.51 \times 10^{-8}}$

% Error = 3%

5) % Error = $\frac{|\text{measured - accepted}|}{\text{accepted}}$ x 100

% Error = $\frac{|2.85 \text{ g/cm}^3 - 2.699 \text{ g/cm}^3|}{2.699 \text{ g/cm}^3}$ x 100 $= \frac{0.18}{2.699}$

% Error = 5.6%

6) % Error = $\frac{|\text{measured - accepted}|}{\text{accepted}}$ x 100

% Error = $\frac{|4.29 \text{ J/gc} - 4.18 \text{ J/gc}|}{4.18 \text{ J/gc}}$ x 100 $= \frac{0.11}{4.18}$

% Error = 2.6%

7) % Error = $\frac{|\text{measured - accepted}|}{\text{accepted}}$ x 100

% Error = $\frac{|196.5 \text{ g} - 200.00 \text{ g}|}{200.00 \text{ g}}$ x 100 $= \frac{3.5}{200.00}$

% Error = 1.8%

1. To light a bunsen burner, first close the gas valve and air slots on the burner. Next, turn on the gas at the main valve. Then, open the valve on the burner one turn. Light then burner with the striker. Finally, adjust the gas and air mixture to create a tight inner blue flame.

2. The tare button is used to rezero the balance. It should be pressed and allow to reset each time the balance is used.

3. We don't use beakers or Erlenmeyer Flasks to measure liquid volumes because these pieces of glassware are not accurate. Instead, we use a graduated cylinder to measure liquid volumes.

4. When using a graduated cylinder to measure liquid volumes, we always measure from the bottom of the meniscus. Once we've aligned our eye with the scale (reducing paralax) we estimate 1 decimal place past the accuracy of the cylinder (typically 0.01 mL).

5. We use a spatula (spoon) to dispense dry chemicals.

6. We must keep the pipets with the proper bottles so we don't contaminate the stock solution.

7. We don't sit on counters or the floor to avoid getting chemicals on ourselves and to avoid tripping others in the room.

8. If you get too much liquid or solid reagent put it in the waste buckets. Returning it to the supply bottle will contaminate the stock supply.

9. When pouring a liquid from a stock bottle first remove the lid and tuck it into the palm of our hand. Next, dispense the liquid and return the lid to the bottle without setting the lid on the counter.