Salt and Sand Lab

II. Purpose: To separate a known amount of salt from a salt/sand mixture.

III. Procedure:

1. Tare a weighing boat and add about 1 gram of salt. Remove from balance
2. Weigh a 50 mL beaker. Record mass
3. Add salt to beaker
4. Reweigh beaker with salt. Record mass
5. Mix a pinch of sand to salt in beaker
6. Measure between 19 & 20 mL of tap water. Record the volume.
   Dissolve the salt in the water
7. Weigh an evaporating dish and watch glass. Record mass
8. Set up a filter to separate the salt water from the sand
9. Filter the salt water into the evaporating dish
10. Remove the water from the salt by boiling in a covered evaporating dish
11. **Once cool**, reweigh the dish and glass with the recovered salt. Record mass
12. Clean up and return watch glass

IV. Data

1. mass of beaker= **24.13 g**
2. mass of beaker + salt= **25.15 g**
3. volume of water = **20.1 mL**
4. mass of evap. dish and watch glass = **44.07 g**
5. mass of evap. dish / watch glass + salt = **44.88 g**

V. Calculations

1. Initial mass of salt

Mass of Beaker & Salt	**25.15g**
-Mass of Beaker	**-24.13g**
Mass of Salt	**1.02g**

2. Mass of salt recovered

Mass of evap dish / WG & Salt	**44.88g**
-Mass of evap dish/ WG	**-44.07g**
Mass of Salt	**0.81g**

3. Percent Error

$$\text{\% error} = \frac{|\text{measured} - \text{accepted}|}{\text{accepted}} \times 100\%$$

$$\text{\% error} = \frac{|0.81\text{ g} - 1.02\text{ g}|}{1.02\text{g}} \times 100\%$$

$$\text{\% error} = \frac{0.21}{1.02\text{g}} \times 100\% = 21\%$$