Name : _____ Band : _____ Lab 6.1

Determining % Oxygen in a Potassium Chlorate sample

Step	What to do	Mass in grams
1	Place a clean dry test tube on a scale and record the mass.	
2	Add on inch of potassium chlorate and record the new mass.	
3	Record the mass of the potassium chlorate (Step 2 – Step 1).	
4	Add on inch of manganese dioxide (catalyst) and record the new mass.	
5	Place the test tube onto a clamp and ring stand. Heat gently until all of the oxygen is removed. Use a glowing splint to tell you when the oxygen is completely removed from the test tube.	
6	Allow the test tube to cool off.	
7	Record the weight of the cool test tube.	
8	Record the mass of the oxygen that was released. (Steps 4-7)	

Analysis and Questions: (SHOW WORK, please use answer spaces)

1.) To determine the percentage of oxygen in the sample, put the mass of the oxygen over the mass of the potassium chlorate. Multiply by 100. Using your date in the space below, solve for the percentage of oxygen in your potassium chlorate sample:

$$\frac{\text{Mass of oxygen}}{\text{Mass of } KClO_3} = _____ \times 100\ \% = _____$$

2.) If 9.03 grams of Mg combines with 3.48 grams of Nitrogen to form a compound, what is the percentage of Mg in this compound?

= _____

3.) From question 2, what would the percentage of Nitrogen be in this compound?

= _____

4.) How many moles of oxygen were liberated (released) in your experiment?

= _____

5.) How many oxygen atoms were liberated (released) in your experiment?

= _____