

Objective: We will use our periodic tables to predict the results of our experiment before we do the experiment, then once we complete the experiment we will see how close we came to our predictions by doing a percent error calculation.

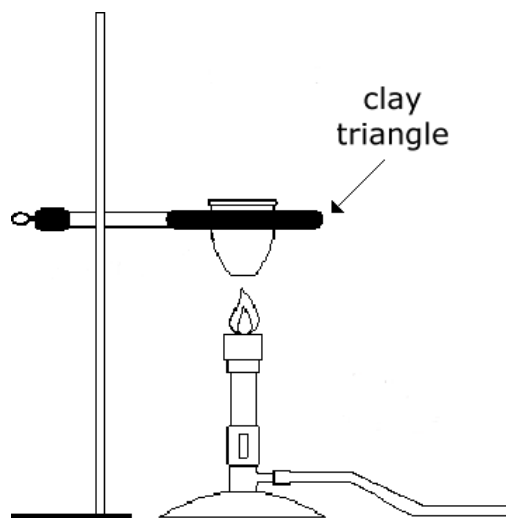
Equipment & Set up: set up Bunsen burners as shown, with lab equipment shown in diagrams. Obtain approximately 25 centimeters of magnesium ribbon, which you will clean with steel wool.



Magnesium



crucible tongs above



ring stand set up at right

Procedure: get equipment and set up properly. We will use the "dirty" crucibles.

Obtain a piece of magnesium, curl it around your pencil as shown. Mass it to the 100th of a gram.

Put curled magnesium into your crucible. Put into full Bunsen burner heat. You may need to lift your Bunsen burner up to do this. While heating your metal, do the Stoichiometry required in question 2 to determine the actual values of MgO that should form.

Cool off crucibles before measuring on scales. Do not melt the scales. When done, wash crucibles with water. Do not put hot crucibles into water, they will crack.

Write word equation & then balanced chemical equation with phase symbols

word: \_\_\_\_\_

Balanced  
reaction: \_\_\_\_\_

what you measured/calculated	answer with proper units
mass crucible	
mass of Mg you started with	
Crucible + Mg (total starting mass)	
Crucible + MgO (Total final mass)	
NET: Mass of MgO produced (this is your measured value for % Error)	

Lab questions (you must show all work to receive credit. Use a lot of paper)

- Using the mass of Mg you started with determine the mass of MgO that should have formed. (do the Stoichiometry, grams to grams)
- Determine your percent error for this experiment. (formula required)
- What reason do you have for this error?
- What is the % composition by mass of magnesium in MgO?
- What is the % composition by mass of oxygen in MgO?
- What type of the five basic reactions was this reaction?
- If we changed this experiment a little, and you started with 56.8 grams of magnesium instead of the little strip you used, how many grams of magnesium oxide should have formed?
- As in question number seven, if you started with 56.8 grams of Mg, how many formula units of MgO would form in this same reaction?
- Using the same balanced equation, if 5.78 moles MgO formed, how many moles of oxygen would have been consumed to do this?

Page of lab report	contains	for these points
cover	Title, objective of lab, word and balanced chemical equations	3
2	data table, show all work on loose leaf	1
3	9 questions	18
last	conclusion	3
this lab due on _____		25

Your conclusion should include

- A. general statement of purpose of lab
- B. what you measured
- C. what you calculated
- D. your % error and why you have this error
- E. your conclusion or determinations about this experiment
- F. why you love chemistry in general (semi-optional) 😊