

Name:

Lab Title: Chemical Reactions

Purpose:

Safety Precautions: Safety goggles must be worn for this experiment.

Procedures:

1. Your group will rotate to 4 different stations.
2. Read through entire set of procedures for each station, then on your worksheet fill in the description, properties of reactants and products and the evidence of a chemical reaction.
3. Finish with the analysis questions on the back.

Description of Exercise	Properties of Reactants	Properties of Products	Evidence of Chemical Reaction
1.	Mg & O ₂	MgO	
2.	CuCO ₂	CuO & CO ₂	
3.	HCl & Zn	ZnCl ₂ & H ₂	
4.	Na ₂ SO ₄ & Ba(NO ₃) ₂	BaSO ₄ & NaNO ₂	

Analysis:

1. Write a balanced chemical equation for each of the reactions by following these steps: First, determine the reactants and products. Second, write the formula for each substance. Third, balance the equation using coefficients to equalize the number of atoms on each side of the equation.
 - a.
 - b.
 - c.
 - d.
2. Use the balanced equation to write the molar proportions for the following:
 - a. Exercise 1: Oxygen to Magnesium oxide
 - b. Exercise 2: Copper carbonate to Carbon dioxide
 - c. Exercise 3: Hydrogen chloride to Zinc chloride
 - d. Exercise 4: Sodium sulfate to Sodium nitrate
3. Endothermic reactions absorb heat and exothermic reactions release heat. Which reactions were endothermic and which were exothermic? Provide evidence for your answers.
4. How can you tell if a chemical reaction has occurred? What are some distinctive changes that can be observed? How do these changes differ from physical changes?

Summary/Conclusions: