

## SCH 3UI Lab: The Percentage Composition by Mass of a Compound

### LAB WRITEUP

1. Title page – title of lab, date done, course code, teacher, name, date due
2. Introduction
  - a. Define the Law of Definite proportions, define the law of conservation of mass
  - b. Describe how both of these laws helped with this lab activity
  - c. Describe the purpose of this lab
3. Materials and Procedure
  - a. Simply state “Please refer to Nelson Chemistry 11 pages 180-181”
  - b. Note any changes in the procedure that occurred
4. Observations
  - a. Table of Quantitative observations
  - b. Table of Qualitative observations
5. Analysis - Answer the following questions
  - a. Write a word equation and balanced chemical equation for the reaction that occurred inside the crucible.
  - b. What evidence do you have that a chemical reaction took place?
  - c. Calculate the theoretical percent composition.
  - d. According to your results, what is the percentage by mass of magnesium and oxygen in magnesium oxide?
6. Evaluation
  - a. Why was the magnesium ribbon polished?
  - b. If you lost some of the ash from the crucible during the lab, would your percentage of magnesium have been too high or too low? Explain mathematically.
  - c. If you failed to heat the magnesium thoroughly enough (so that all the magnesium reacted with oxygen in the air), how would this affect your value for the percentage of magnesium? Explain.
  - d. How did your results compare to the accepted values? Calculate your percentage error  
$$(\% \text{ error} = (( | \text{ expected} - \text{observed} | ) / \text{expected}) \times 100\%).$$
  - e. Compare your results to two other groups
  - f. State your possible source(s) of experimental error.
  - g. Suggest a modification in the procedure to ensure all the magnesium completely reacts with oxygen