

## Empirical Formula of Magnesium Oxide Lab Report Checklist. (due 10/31)

Include all the following sections in your write up, and include ALL the titles in bold from below. All write up work can be the same as your partner... except the conclusion... you must both turn in your own write up.

### INTRODUCTION

\_\_\_ Your name in **BOLD**. (*Also* include your partner's name, *not in bold*.)

\_\_\_ **Title**

\_\_\_ **Purpose** This is a section with brief background information. What is magnesium? What is magnesium oxide? What is an empirical formula? What is the correct predicted or theoretical ratio between the two elements? How will you know if you are correct? How does this relate to conservation of mass? Why is this lab important? What is the chemical reaction for this lab?

\_\_\_ **Problem/Question** What are you trying to figure out by doing this lab?

\_\_\_ Include a **Balanced equation** for the chemical reactions done in this lab.

### DATA COLLECTION

\_\_\_ Units on all numbers

\_\_\_ **Uncertainties** ( +/- from the balance)

\_\_\_ Significant figures (round answers after calculations to the least number of sig figs from your measured numbers)

\_\_\_ **Qualitative (narrative) data**

\_\_\_ **Data Table** (you got this in the first handout... mass of empty crucible, etc)

### DATA PROCESSING

\_\_\_ **Data Entry** Post your group data to class data set online. Use the google spreadsheet linked on the blog to enter all your data.

\_\_\_ **Calculations**. Show how you calculated your groups empirical formula. Include units on all calculations. Clearly state what your groups empirical formula is. Calculate the **percent error** ( **(theoretical or accepted value – experimental value)/theoretical (accepted) value** ) X 100 This is a comparison between your groups empirical formula to the true or accepted empirical formula of magnesium oxide.

**CONCLUSION/ANALYSIS** Your own.... part....

\_\_\_ Summarize what was done, briefly restate purpose of experiment (from your introduction)

\_\_\_ Discuss your groups results compared to the class and to the accepted or true formula for magnesium oxide.

\_\_\_ Explain the difference by discussing **systematic error** (systematic means problems with the experiment design and procedure used). What are ***the assumptions*** made in the procedure given to you? What are the possible effects on the result?

\_\_\_ **Improvements.** State realistic improvements, suggest an improvement for each error that you listed, stay away from general sweeping statements. You can't say 'get a different lab partner...' 😊