

Name: _____
Per: ___

Empirical Formula Lab

II. Purpose: To determine the empirical formula of a simple binary compound by weighing its components.

III. Procedure:

1. Clean a crucible by carefully scraping out as much residue as possible and wiping with a paper towel
2. Measure the mass of the crucible
3. Tear a 20 cm piece of Magnesium into 1 cm pieces
4. Place all the Mg pieces in crucible
5. Measure mass of crucible and Mg
6. Heat strongly for 15 minutes, checking after 5 minutes to ensure the reaction has begun
7. Allow to cool
8. Mass crucible and contents
9. Clean up

IV. Data

Mass of crucible _____ grams

Mass crucible & Mg _____ grams

Mass crucible & product _____ grams

V. Calculations

Find the mass of the Mg used

Find the mass of the oxygen that reacted

Using these masses, determine the empirical formula for the product of this reaction.
(Hint: This is just like the empirical formula calculation process you learned recently)

VI. Conclusion

1. From your data and calculations, what is the ratio of Mg to O by mass? How about by moles? Why are they different?

By mass

By moles

2. Write the formula of Magnesium oxide using charges.

3. How does this formula compare with the formula you determined from your data? If they are different, why?
