

Name: \_\_\_\_\_

15 Pts.

### Chemistry Lab: Determining an Empirical Formula

#### III. Prelab:

- Write a balanced equation (including phase notation) for this reaction of both magnesium and oxygen and separately magnesium and nitrogen.
- What is the formula of the theoretical oxide of magnesium (use your ion sheet).

#### IV. Analysis

##### Observation and Data:

Mass of empty crucible:	
Mass of crucible + Mg	
Mass of crucible + oxide	
Odor vapor from step #6	

#### V. Calculations: (you must show your work!)

- Mass of magnesium:
- Moles of magnesium:
- Mole ratio of Mg : O
- Mass of oxygen that reacted:
- Moles of oxygen (O)
- Mass ratio of Mg : O

#### VI. Conclusion Questions:

- Based on your calculations, write the empirical formula for your oxide of magnesium. How does your data support the theoretical formula of magnesium oxide ?
- Compare and contrast the mole:mole ratio with the mass:mass ratio of magnesium oxide.
- Find the percent composition of magnesium and of oxygen in your product