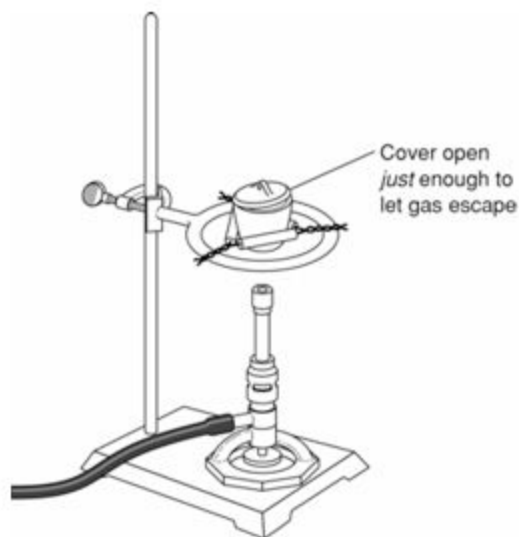


Lab - Converting Magnesium

Purpose: To convert magnesium into a new substance through use of a crucible. To determine the most likely product from the chemical reaction.

Procedure:



1) Measure and record the mass of a clean, empty crucible. Add approximately 1.0 g of magnesium to the crucible. Record the mass of the crucible with the magnesium. Determine the exact mass of magnesium in the crucible.

2) Observe some physical properties of the magnesium. Record in your data table.

3) Set up the crucible, clay triangle and burner as shown in the figure. The crucible lid should be slightly ajar.

4) Light the burner and adjust the height of the flame so that the flame just touches the bottom of the crucible.

5) Heat the crucible and its contents for two minutes. Remove the flame, and use a microspatula or stirring rod to break up the solid so that the magnesium is exposed to the air. If the magnesium catches on fire in the crucible, place the lid over the crucible to extinguish the flame. *CAUTION: Avoid touching the extremely hot crucible.*

6) Continue heating for an additional eight minutes, removing

the flame and breaking up the magnesium every two or three minutes.

7) When finished heating, extinguish the flame and allow the crucible and contents to cool for a few minutes. While you are waiting, make observations of the solid and record physical properties in the data table.

8) When the crucible is cool enough to touch and pick up with your fingers, find the mass of the crucible and its contents. Record the mass in the data table. Calculate the mass of the contents.

9) Transfer the product to a container provided by your teacher. Label the container with your name and save the product for future use.

10) Clean up and wash your hands before leaving the lab.

Data Table:

Mass of crucible	
Mass of crucible and magnesium	
Mass of magnesium	
Observations of magnesium before heating	
Mass of crucible and product	
Mass of product	
Observations of product after heating	

Questions:

- 1) Were the changes you observed physical or chemical? How do you know?
- 2) Describe the changes you observed as you heated the magnesium.
- 3) Did the magnesium atoms remain in the crucible? Explain.
- 4) What happened to the mass of the product after you heated the magnesium?
- 5) Why do you think the mass changed?

Conclusion: