

Combustion Process

Name _____

Phenomenon: Watch as your teacher adds the amounts of each chemical and fill in the data table.

Test tube #1: Acid plus magnesium

Test tube #2: Peroxide and manganese oxide

Test Tube #3: Baking soda and vinegar

Results of Flame Test

What gas formed (see the chart below)

#1	
#2	
#3	

Gas	Density	Reaction with splint	Molar mass
H ₂ Hydrogen	.088	Burns rapidly-popping sound	2
He Helium	.1761	Non-reactive	4
Air Mixture	1.27	Allows splint to continue burning	29
O ₂ Oxygen	1.40	Allows splint to increase the rate of burning	32
CO ₂ Carbon Dioxide	1.935	Extinguishes flame	44
SF ₆ Sulfur Hexafluoride	6.17	Non-reactive	148

Question: What gases are produced when a candle burns?

Materials: candle, fire, jar, matches or lighter, and wooden splint.

Lab procedure: What will you do?

1.

2.

3.

4.

5.

Data:

Analysis:

1. Which gases were produced? How did you know?
2. What is the chemical formula for the combustion of a candle? (The candle can be considered a Hydrocarbon C_xH_y)

Summary

Make a **claim** about the reactants and products of combustion.

What **evidence** supports your claim?

What **reasoning** did you use?