

Common Gases

Data Table

Physical and Chemical Properties of Common Gases		
Test Tube A	Name and Formula of Gas	
	Color and Odor	
	Burning Splint Test	
Test Tube B	Name and Formula of Gas	
	Color and Odor	
	Glowing Splint Test	
Test Tube C	Name and Formula of Gas	
	Color and Odor	
	Match Test	

Post-Lab Questions

1. Identify the common gas or gases prepared in this experiment:

<i>a</i> . Lightest element in the universe	Hydrogen, H ₂
b. Needed for the burning of fossil fuels	Oxygen, O ₂
and for respiration in animals	Carbon Dioxide, CO ₂

c.Combustible

d. Extinguishes a flame

e. Required for photosynthesis

2. Explain the observations in the glowing splint test for oxygen.

3. Circle and label the physical and chemical properties of chlorine in the following description:

"Chlorine is a greenish-yellow gas that dissolves in water and is toxic to humans. It combines violently with sodium metal to form sodium chloride, a white solid that melts at 800 °C."

- 4. Consult a Periodic Table: Name the elements that exist as gases at room temperature and give their symbols or formulas. *Hint:* Some elements, such as nitrogen, exist as diatomic, or *two atom*, molecules (e.g., N₂) in their free state.
- 5. *a*. Which gaseous elements (see Question #4) are toxic? *b*. Which gaseous elements are considered inert or unreactive?

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