

# 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

- Identify the common gas or gases prepared in this experiment:
  - Lightest element in the universe  
Hydrogen, H<sub>2</sub>
  - Needed for the burning of fossil fuels and for respiration in animals  
Oxygen, O<sub>2</sub>  
Carbon Dioxide, CO<sub>2</sub>
  - Combustible
  - Extinguishes a flame
  - Required for photosynthesis
- Explain the observations in the glowing splint test for oxygen.
- 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.”*
- 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., N<sub>2</sub>) in their free state.
- Which gaseous elements (see Question #4) are toxic?
  - Which gaseous elements are considered inert or unreactive?