

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	
Test Tube C	Name and Formula of Gas	
	Color and Odor	
	Litmus Test	
Test Tube D	Name and Formula of Gas	
	Color and Odor	
	Glowing Splint Test	
Test Tube E	Name and Formula of Gas	
	Color and Odor	
	Match Test	

Post-Lab Questions

1. Identify the common gas or gases prepared in this experiment:
 - a. Contributes to industrial smog and air pollution? _____
 - b. Lightest element in the universe? _____
 - c. Needed for the burning of fossil fuels and for respiration in animals? _____
 - d. Dissolves readily in water and is used as a fertilizer? _____
 - e. Combustible? _____
 - f. Extinguishes a flame? _____
 - g. Has an odor? _____
 - h. Required for photosynthesis? _____
2. Explain the observations of the glowing splint test for oxygen.

3. Explain the observation of the litmus test for ammonia.

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

“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.”
5. Consult a Periodic Table: Name the elements that exist as gases at room temperature and give their symbols or formulas. *Hint:* Recall that some elements exist as diatomic molecules in their free state.
6. (a) Which gaseous elements (see Question #5) are toxic? (b) Which gaseous elements are considered inert or unreactive?