

1. The most efficient way to determine whether a reaction is an exothermic chemical reaction is to use —

- A an oxygen probe
- B a temperature probe
- C a pressure probe
- D a pH probe

2. What is the molarity of a solution with 0.2 moles of potassium permanganate (KMnO_4) dissolved in enough water to make a 500.0 mL solution?

- A 0.0004 M
- B 0.1 M
- C 0.4 M
- D 100 M

3. Which of these is NOT required to ensure that stock solutions are free of contamination?

- A Store all solutions in brown bottles
- B Do not place dropping pipettes in stock solution bottles
- C Never return excess chemicals to stock bottles
- D Replace tops on reagent bottles after use

4. What is the name for FeCl_3 using the IUPAC nomenclature rules ?

- A Iron chloride
- B Iron (II) chloride
- C Iron trichloride
- D Iron (III) chloride

5. Based on the information provided, which solution is a base and a weak electrolyte?

- A NaHCO_3
- B HClO
- C NaNO_3
- D CH_3NH_2

Data Table

Solution	Brightness of Light Bulb	pH
NaHCO_3	Bright	8.4
HClO	Dim	3.7
NaNO_3	Bright	7.0
CH_3NH_2	Dim	8.0

6. An expandable container of oxygen gas has a volume of 125 mL at a temperature of 25.0°C . What volume will the gas occupy at 55.0°C ?