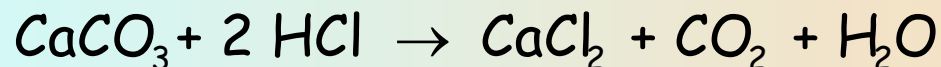


Stoichiometry: Exercises

1. Calculate the volume of carbon dioxide released at room temperature and pressure (25 °C and 1 atm) when 25 cm³ of 2M hydrochloric acid reacts with calcium carbonate



What mass of calcium carbonate would be used up during the reaction?

C=12; O=16; Ca=40.

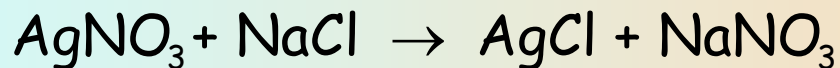
2. What is the volume of 2M hydrochloric acid needed to react with 1.25 g of magnesium carbonate, MgCO₃?



C=12; O=16; Mg=24

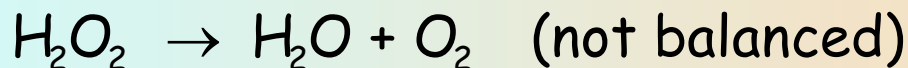
Stoichiometry: Exercises

3. When enough silver nitrate is added to 10 mL of sodium chloride solution, 0.780 g of silver chloride was obtained. Find the concentration of the sodium chloride solution in g/L

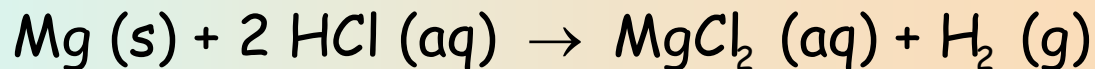


Na=23; Cl=35.5; Ag=108

4. What volume of oxygen (measured at 27 °C and 800 mmHg) could be obtained from decomposition of 50 cm³ of 2M hydrogen peroxide?



5. A sample of impure magnesium was analyzed by allowing it to react with HCl solution:



After 1.32 g of the impure metal was treated with 0.1 L of 0.750 M HCl, 0.0125 mol HCl remained unreacted. Assuming the impurities do not react with the acid, what is the mass % Mg in the sample? (Mg=24)