

Exercise 1.61 – Molarity and concentration

Calculate the molarity of the following solutions.

Q161-01: 3.65 g of HCl in 1000 cm³ of solution

Q161-02: 3.65 g of HCl in 100 cm³ of solution

Q161-03: 1.00 g of NaOH in 250 cm³ of solution

Q161-04: 1.96 g of H₂SO₄ in 250 cm³ of solution

Q161-05: 25.0 g of Na₂S₂O₃·5H₂O in 250 cm³ of solution

Q161-06: Calculate the concentration of hydrogen ions in a 2M solution of hydrochloric acid.

Q161-07: Calculate the concentration of hydrogen ions in a 2M solution of sulfuric acid.

Q161-08: Calculate the molarity of the sodium ions in solution when 10.6g of anhydrous sodium carbonate is dissolved in 50cm³ of water and the volume made up to 100cm³.

Q161-09: Calculate the molarity of the chloride ion solution produced, when 1.345 g of copper chloride is dissolved in 100cm³ of water and the solution volume made up to 250cm³.

Q161-10: Calculate the molarity of the potassium carbonate solution formed by absorbing 4.4g of carbon dioxide in 500cm³ of 2M potassium hydroxide solution, according to the equation:

$$2\text{KOH} + \text{CO}_2 \longrightarrow \text{K}_2\text{CO}_3 + \text{H}_2\text{O}$$
