

Question # 81373

- (a) Calculate the molarity of a solution made by dissolving 0.0715 mol Na₂SO₄ in enough water to form 650 mL of solution. Answer to correct significant figures WebAssign will check your answer for the correct number of significant figures. M
- (b) How many moles of KMnO₄ are present in 50.0 mL of a 0.0950 M solution? Answer to correct significant figures WebAssign will check your answer for the correct number of significant figures. Mol
- (c) How many milliliters of 10.6 M HCl solution are needed to obtain 0.105 mol of HCl? Answer to correct significant figures WebAssign will check your answer for the correct number of significant figures.

Answer:

- (a) The molarity of the resulting Na₂SO₄ solution is equal to 0.11 M.

$$C_M = \frac{0.0715}{0.650} = 0.11 \text{ M}$$

- (b) 0.00475 mol of KMnO₄ was provided in 50.0 ml of a 0.0950 M KMnO₄ solution.

$$n = 0.0950 * 0.050 = 0.00475 \text{ mol}$$

- (c) To obtain 0.105 mol in a sample of 10.6 M HCl solution, 9.906 ml of this solution is required.

$$V = \frac{0.105}{10.6} * 1000 = 9.906 \text{ ml}$$