

Name: §04 Date:

Reactions in Aqueous Solutions – Molarity Practice

STOICHIOMETRY

- 1. A reagent bottle is labeled 0.250 *M* K₂CrO₇.
 - a. How many moles of K₂CrO₇ are present in a 0.333 mL sample?
 - b. How many milliliters of this solution are required to provide 0.800 mol of potassium ion?
 - c. Assuming no volume change, how many grams of K₂CrO₇ are do you need to add to 2.00 L of this solution to make 1.000 M of K₂CrO₇?
 - d. If 50.0 mL of this solution is added to enough water to make 125 mL of solution, what is the molarity of the diluted solution?

ACID-BASE

2. What is the molarity of a solution of nitric acid if 0.216 g of barium hydroxide is needed to neutralize 20.00 mL of concentrated (15.8 *M*) nitric acid?

REDOX

3. Write the balanced chemical equations for the following reactions:

 $CrO_4^{2-} + SO_3^{2-} \rightarrow Cr^{3+} + SO_4^{2-}$ (acidic solution)