Non Sibi High School

Andover's Chem 250: Introductory/Basic Chemistry

Chapter 6, Review Quiz 1

1

Calculate the molarity of a solution containing 2.0 grams of $CO(NH_2)_2$ dissolved to make 135 mL of solution.

2

How many milliliters of 0.0915 M solution contain 0.30 grams of dissolved $C_6H_{12}O_6$?

3

Given the unbalanced equation $AgNO_3(aq) + Na_2CrO_4(aq) \longrightarrow Ag_2CrO_4(s) + NaNO_3(aq)$, if 255 mL of 0.114 M $AgNO_3$ react, how many grams of Ag_2CrO_4 will be produced?

4

Given the unbalanced equation $KHCO_3(s) + H_2SO_4(aq) \longrightarrow K_2SO_4(aq) + CO_2(g) + H_2O(l)$, if 10.7 grams of $KHCO_3$ is added to 22.5 mL of 1.64 M H_2SO_4:

a. Which is the limiting reagent and what maximum volume of CO_2 can form at STP?
b. What mass of the excess reagent remains when the reaction is complete?

5

Given the unbalanced equation $Al(s) + HBr(aq) \longrightarrow AlBr_3(aq) + H_2(g)$, if 54.6 mL of 0.222 M HBr react with an excess of solid aluminum and then 0.0118 grams of H_2 gas are actually collected, what is the percent yield of the reaction?

6

If water is evaporated from 55 mL of 0.17 M NaOH solution until the volume is 11 mL, what will be the new molarity of the solution?

7

How many milliliters of 0.86 M KI must be diluted to obtain 250. mL of 0.28 M KI?

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