Non Sibi High School

Andover's Chem 550/580: Advanced Chemistry

Chapter 10, Review Quiz 1

1

Write a balanced equation for the combustion of each compound below using the smallest possible whole-number coefficients:

    a. butane
    b. pentanol
    c. C_6H_5SH

2

Write a balanced equation for each reaction described below using the smallest possible whole-number coefficients:

    a. lithium oxide reacts with water
    b. potassium carbonate decomposes upon heating
    c. aluminum metal reacts with chlorine gas
    d. cesium metal reacts with water

3

What is the molarity of each ion in the following solutions?

    a. 0.032 M $CrCl_3$
    b. 0.12 M $(NH_4)_2SO_4$

4

Indicate if any of the combinations below yield no reaction and also write a balanced net ionic equation, including states of matter, for any combinations that do yield a precipitate:

    a. $Cu(NO_3)_2(aq) + K_3PO_4(aq)$

b. $Pb(CH_3COO)_2(aq) + NaCl(aq)$
c. aqueous lithium chloride + aqueous ammonium bromide
d. aqueous iron(III) nitrate + aqueous potassium chromate

5

Write a balanced molecular equation, including states of matter, for the reaction between solutions of sulfuric acid and potassium hydroxide.

6

How many milliliters of 0.117 M strontium hydroxide are required to titrate 32.5 mL of 0.146 M acetic acid?