Limiting Reactant Practice

1. Given the following reaction:   (Balance the equation first!)

    C3H8    +    O2    ------->     CO2      +     H2O

1. If you start with 14.8 g of C3H8 and 3.44 g of O2, determine the limiting reagent
2. determine the number of moles of carbon dioxide produced
3. determine the number of grams of H2O produced
4. determine the number of grams of excess reagent left

2. Given the following equation: (Balance first!)

  Al2(SO3)3   +  NaOH  ------> Na2SO3    +  Al(OH)3

1. If 10.0 g of Al2(SO3)3 is reacted with 10.0 g of NaOH, determine the  limiting reagent
2. Determine the number of moles of Al(OH)3 produced
3. Determine the number of grams of Na2SO3 produced
4. Determine the number of grams of excess reagent left over in the reaction

Percent Composition and Molecular Formula Worksheet

1. What’s the empirical formula of a molecule containing 65.5% carbon, 5.5% hydrogen, and 29.0% oxygen?
2. If the molar mass of the compound in problem 1 is 110 grams/mole, what’s the molecular formula?

 *Write the molecular formulas of the following compounds:*

1. A compound with an empirical formula of C2OH4 and a molar mass of 88 grams per mole.
2. A compound with an empirical formula of CFBrO and a molar mass of 254.7 grams per mole.
3. A component of protein called serine has an approximate molar mass of 100 g/mole. If the percent composition is as follows, what is the empirical and molecular formula of serine?

C = 34.95 % H= 6.844 % O = 46.56 % N= 13.59 %