Skill Practice 40

Moles and Formulas

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hour: \_\_\_\_\_

Practice

1. What is the percent by mass of carbon in Al2(CO3)3?
2. Find the percent composition of oxygen in each of the following compounds:

a) Na2O b) Mg(NO3)2

1. Find the percent composition of nitrogen in each of the following compounds.

a) (NH4)2O b) N3O5

1. What is the empirical formula of a compound that contains 25.9% nitrogen (N) and 74.1% oxygen (O) by mass?
2. What is the molecular formula of a compound that has an empirical formula of NO2 and a molar mass of 138 g/mol?
3. A compound contains 64.3% carbon, 7.14% hydrogen and 28.6% oxygen. The molecular formula has a molecular mass of 448 amu.
4. What is the empirical formula for this compound?
5. What is the molecular formula for this compound?
6. A certain compound contains 26.35% C, 3.30% H and 70.35% O. If the molecular mass of this compound is 819 amu, what is the molecular formulas of the compound?