

Name \_\_\_\_\_

### Chapter 6 Practice 2 Ver A

1. What is the mass in grams of 5.00 moles of  $\text{Fe}_2\text{O}_3$ ?
2. Find the mass, in grams, of  $1.0 \times 10^{23}$  molecules of  $\text{N}_2$ .
3. How many molecules of  $\text{SiF}_4$  are in 15.0 g of silicon tetrafluoride?
4. How many moles are in 38.12 grams of  $\text{CO}_2$ ?
5. Rubbing alcohol was found to contain 60.0 % carbon, 13.4 % hydrogen, and 26.6 % oxygen. What is the empirical formula of rubbing alcohol?

6. Calculate the empirical formula of the following compounds given their percent composition.

a. a compound that is 68.4 % Cr and 31.6 % O

b. a compound that is 63.5 % Ag, 8.2 % N, and 28.3 % O

7. Given the following the empirical formulas and molar masses, what is the molecular formula of the following compounds.

a.  $\text{CH}_2\text{O}$ , molar mass is 90 g/mol

b.  $\text{CFBrO}$ , molar mass is 509.6 g/mol

c.  $\text{C}_2\text{OH}_4$ , molar mass is 88.1 g/mol

8. Find the percent composition (by mass) of nickel (II) hydroxide.

% Ni = \_\_\_\_\_

% O = \_\_\_\_\_

% H = \_\_\_\_\_

9. Find the percent composition (by mass) of nitric acid.

% N = \_\_\_\_\_

% O = \_\_\_\_\_

% H = \_\_\_\_\_