Chemical Formula Calculations
CHEMISTRY 110

Name_____

last   first

1] What is the percentage by mass composition of Iron (III) oxide?

_____

2] Calculate the molar mass of $C_3H_5N_3O_9$ (Nitroglycerin, an explosive)

_____

3] How many atoms are found in 1.55 grams in chlorine gas?

_____

4] When silver was selling for $16.00 per ounce, how many silver atoms could you buy for 10.00 dollars?

_____

5] How many grams of carbon are there in 14.0 g of $Pb(C_2H_5)_4$ (tetraethyllead, a gasoline additive)?

_____

6] A mixture contains 10.00 g of NaBr and 5.00 g of $BaBr_2$. What is the total number of moles of bromide ions in the mixture?

_____

7] Determine the moles of sodium in 7.22×10^{100} kg of $Na_2S_2O_3$

_____

8] How many atoms of Zn would contain the same number of grams as 7.54×10^{-6} mg of Cu?

_____

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9] What is the total number of atoms in 8.00 mole aluminum dichromate?

_____

10] A typical aspirin tablet contains 5.0 grains of acetyl salicylic acid, $C_9H_8O_4$. How many moles of acetyl salicylic acid are in a single tablet?(0.0648 g = 1.00 grain)

_____

11] 4.159 g of a iron and sulfur containing compound is decomposed to give 2.233g of iron
      What is the empirical formula?

_____

12] The percent composition of a compound is 20.0% C, 2.2% H, and 77.8% Cl. The molar mass of the compound is 182.0 g/mol
      a. Find the empirical formula

_____

      b. Find the molecular formula

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