**HW2**

**More Empirical and Molecular Formulas**

1. What is the formula weight of hydrazine: N2H4? .

2. Find the formula weight of sulfuric acid: H2SO4. .

1. Vinegar contains acetic acid: HC2H3O2. Find its percent composition:

%H %C %O

1. All baking powders contain sodium hydrogen carbonate: NaHCO3. Calculate its percent composition.

%Na %H %C %O

1. Cinnabar, an ore of mercury, has the formula HgS. Calculate the number of moles of mercury recovered from 1.00 kg of cinnabar. .
2. What is the empirical formula of a compound with 24.58% potassium, 34.81% manganese, 40.50% oxygen? .
3. Calculate the empirical formula for a compound having 37.70% sodium, 22.95% silicon, and 39.34% oxygen. .
4. The analysis of a gas reveals this composition: 92.3% carbon and 7.7% hydrogen. Its molecular weight is 26.0 g/mol. What is its molecular formula?

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1. Analysis of a compound reveals this composition: 80% carbon and 20% hydrogen. Its molecular weight is 30 g/mol. What is its molecular formula?

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1. By analysis, a compound is found to be 76.0% iodine and 24.0% oxygen. Its molecular weight is 334 g/mol. Determine its molecular formula.

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