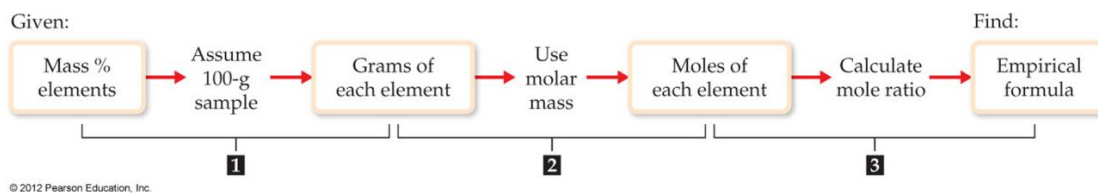


Finding Empirical and Molecular Formulas (Completion)

Instructions: Read the following problems and complete the correct calculations. SHOW ALL WORK.



1) A compound contains 40.0% C, 6.71% H, and 53.29% O by mass. The molecular weight of the compound is 60.05 amu.

a) What is the empirical formula?

b) What is the molecular formula?

2) A compound that is composed of carbon, hydrogen, and oxygen contains 70.6% C, 5.9% H, and 23.5% O by mass. The molecular weight of the compound is 136 amu.

a) What is the empirical formula?

b) What is the molecular formula?

3) Ibuprofen, a headache remedy, contains 75.69% C, 8.80% H, and 15.51% O by mass, and has a molar mass of 206 g/mol.

a) What is the empirical formula?

b) What is the molecular formula?

4) Epinephrine (adrenaline), a hormone secreted into the bloodstream in times of danger or stress, contains 59.0% C, 7.1% H, 26.2% O, and 7.7% N by mass. Its molecular weight is about 180 amu.

a) What is the empirical formula?

b) What is the molecular formula?

