1. Cyclopropane, a compound that contains only C and H, is used as an anesthetic. A sample of this compound is burned in a combustion analysis apparatus. The sample size is 1.00 g, and 3.14 g of CO2 and 1.29 g of H2O are produced. What is the empirical formula of cyclopropane?
2. A compound containing only C and H is subjected to combustion analysis. From a 20.0 g sample of the compound, 67.5 g of CO2 and 13.8 g of H2O are obtained. What is the empirical formula of the compound?
3. A compound contains C, H, N and O. A 4.500 gram sample was burned to give 6.83 grams of CO2, 2.33 grams of water, and 0.72 grams of N2. Find the empirical formula of this compound.