

Revised August 2011



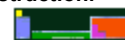
HONORS WORKSHEET 4e: Combustion analysis



1. When 0.62 g of a compound containing only carbon, hydrogen, and oxygen was completely burned in oxygen, 0.88 g CO₂ and 0.54 g H₂O were produced. What is the empirical formula of the compound?

What is the molecular formula if the molecular weight is 62.1 g mol⁻¹? (4)

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2. The combustion of 49.14 grams of a compound that contains only C, H, N and O yields 84.49 grams of CO_2 and 27.65 grams of H_2O .

Another sample of the compound with a mass of 96.72 grams is found to contain 24.18 grams of O. What is the empirical formula of the compound? (6)