



KEC

K Education Centre



AS Chemistry

C5.1: Empirical and Molecular Formulae

Assignment Questions

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Year 2023

Empirical and Molecular Formulae

Q1: A solid contains 0.874 g of chromium, 0.706 g of nitrogen and 2.42 g of oxygen . Calculate its empirical formula.

Q2: An organic compound containing only carbon, hydrogen and oxygen was found to have 52.17% carbon and 13.04% hydrogen. What is its molecular formula if $M_r = 46.0$?

Q3 : 0.500 g sample of a compound containing carbon, hydrogen, and oxygen is combusted to produce 0.900 g of CO_2 and 0.306 g of H_2O . Calculate the empirical formula of the compound.

Q4 : A student analyses the combustion products of an unknown hydrocarbon and determines that it contains 85.7% carbon and 14.3% hydrogen. Calculate the empirical formula of the hydrocarbon.

Q5: 0.725 g sample of an organic compound is burned, producing 2.095 g of CO_2 and 0.725 g of H_2O . Determine the empirical formula of the compound.