

Empirical and Molecular Formula Practice Solutions

1. A compound is found to contain 63.52 % iron and 36.48% sulfur. Find its empirical formula.
2. A compound is found to contain 26.56% potassium, 35.41% chromium, and the remainder oxygen. Find its empirical formula.
3. A 60.00 g sample of tetraethyllead, a gasoline additive, is found to contain 38.43 g lead, 17.83 g carbon, and 3.74 g hydrogen. Find its empirical formula.
4. A 170.00 g sample of an unidentified compound contains 29.84 g sodium, 67.49 g chromium, and 72.67 g oxygen. Find the empirical formula.

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5. Determine the molecular formula of the compound with an empirical formula of CH and a formula mass of 78.110 amu.
6. Determine the molecular formula of a compound with an empirical formula of NH_2 and a formula mass of 32.06 amu.
7. A sample of a compound with a formula mass of 34.00 amu is found to consist of 0.44 g H and 6.92 g O. Find its molecular formula.