

PAIR CHECK

Percent Composition – Determine the % of each element in each compound.

1. KMnO_4
2. HCl
3. $\text{Mg}(\text{NO}_3)_2$
4. $(\text{NH}_4)_3\text{PO}_4$
5. $\text{Al}_2(\text{SO}_4)_3$

Empirical Formulas – Determine the empirical formula.

1. 75% carbon, 25% hydrogen
2. 52.7% potassium, 47.3% chlorine
3. 22.1% aluminum, 25.4% phosphorus, 52.5% oxygen
4. 13% magnesium, 87% bromine
5. 32.4% sodium, 22.5% sulfur, 45.1% oxygen
6. 25.3% copper, 12.9% sulfur, 25.7% oxygen, 36.1% water

Molecular Formulas

1. The empirical formula of a compound is NO_2 . Its molecular mass is 92 g/mol. What is its molecular formula?
2. The empirical formula of a compound is CH_2 . Its molecular mass is 70 g/mol. What is its molecular formula?
3. A compound is found to be 40.0% carbon, 6.7% hydrogen, and 53.5% oxygen. Its molecular mass is 60. g/mol. What is its molecular formula?
4. A compound is 64.9% carbon, 13.5% hydrogen, and 21.6% oxygen. Its molecular mass is 74 g/mol. What is its molecular formula?
5. A compound is 54.5% carbon, 9.1% hydrogen, and 36.4% oxygen. Its molecular mass is 88 g/mol. What is its molecular formula?