

Percent Composition and Empirical Formulas

1. Baking powder contain sodium hydrogen carbonate. Calculate its percent composition.
2. Which of these compounds contains the highest percent of nitrogen?
a. calcium nitrate b. silver nitrate c. ammonium sulfate
3. Calculate the percent CaO in CaCO_3 .
4. What is the percent composition of the drug chloramphenicol, $\text{C}_{11}\text{H}_{12}\text{N}_2\text{O}_5\text{Cl}_2$?
5. Calculate the percent of water in the hydrate, $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$.
6. What is the empirical formula of silver fluoride? It is 85% silver.
7. One compound of platinum and chlorine is known to consist of 42.1% chlorine. Another consists of 26.7% chlorine. Determine the two empirical formulas and write the name of each compound.
8. Analysis: potassium, 24.58% ; Manganese, 34.81% ; Oxygen, 40.52% . What is the empirical formula and name of the compound?
9. Analysis: Iron, 48.2% ; Carbon, 10.4% ; Oxygen, 41.4%. What is the empirical formula and name of the compound?
10. Analysis: Aluminum, 15.8% ; Sulfur, 28.1 % ; Oxygen, 56.1 % . What is the empirical formula and name of the compound?