

Mole Review

Calculate Molar Mass

1. PbSO_4
2. $\text{Ca}(\text{NO}_3)_2$

Mole Conversions:

3. How many particles are in 0.0695 moles of HNO_2 ?
4. How many grams of benzene (C_6H_6) are in 4.60 moles?
5. What is the mass of 6.30 moles of PbSO_4 ?
6. How many particles are in 144g of Al_2O_3 ?
7. What is the mass of 7.68×10^{24} atoms of gold?
8. How many particles are in .371 grams of iron (III) oxide?

Percent Composition:

9. What is the percent composition for each element in sulfur dioxide (SO_2)?

10. What is the percent composition of oxygen in $\text{Al}_2(\text{SO}_4)_3$?

Empirical & Molecular Formulas:

11. What is the empirical formula for a compound if a sample contains 4.09g of zinc and 1.00g of oxygen?

12. Determine the empirical formula of a compound containing 24.74 grams potassium, 34.76 grams manganese, and 40.50 grams oxygen.

13. Determine the empirical and molecular formulas of an unknown compound, given that a 212.1g sample contains 42.4g of hydrogen and 169.7g of carbon. The molecular mass is 30.0g/mol.