

4. Determine the **molecular formula** of a compound that contains 76% iodine and 24% oxygen and has a molar mass of 334g/mol.
5. Determine the **molecular formula** of a compound that contains 48.6% carbon, 8.1% hydrogen, and 43.2% oxygen and has a molar mass of 296-g/mol.
6. Determine the **molecular formula** of a compound that contains 0.993-g nitrogen, 1.27-g carbon, 0.213-g hydrogen, 2.52-g chlorine and has a molar mass of 423-g/mol.
7. A sample of TNT, a common explosive is analyzed and found to contain 1.03-g of nitrogen, 0.220-g hydrogen, and 1.76-g of carbon. The molar mass is 123 g/mol. What is the **molecular formula**?
8. Azobenzene is an important intermediate in the manufacture of dyes. It contains 79.1% carbon, 5.55% hydrogen, and 15.4% nitrogen. It has a molar mass of 182-g/mol. What is the **molecular formula**?