

ANALYSIS



Chemical reactions are represented by chemical equations. In a chemical equation, the reactants are written on the left side and the products are written on the right side. The equation is balanced when the number of atoms of each element is the same on both sides. The plus sign (+) is used to separate the reactants, and the arrow (→) points to the products. The coefficients in front of the chemical formulas indicate the number of molecules of each substance involved in the reaction.

Chemical reactions are classified into several types based on the number and nature of reactants and products. A combination reaction is a reaction in which two or more substances combine to form a single product. A decomposition reaction is a reaction in which a single substance breaks down into two or more products. A single displacement reaction is a reaction in which one element replaces another element in a compound. A double displacement reaction is a reaction in which two compounds exchange ions or atoms to form two new compounds.