

Stoichiometry: Calculation with Chemical Formulas and Equations

Chemical Equations.

The quantitative nature of chemical formulas and reactions is called stoichiometry.

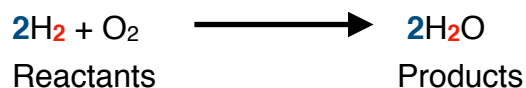
Lavoisier observed that mass is conserved in a chemical reaction (**Law of Conservation of Mass**). Matter can not be lost in any chemical reactions.

Chemical equations give a description of a chemical reaction.

There are two parts to any equation:

Reactants (written to the left of the arrow) and

Products (written to the right of the arrow);



There are two sets of numbers in a chemical equation.

1) Numbers in the front of the chemical formula, blue color (stoichiometric Coefficients). They give the ration in which the reactants and products exist and

2) Numbers in the formulas, red color (subscripts). They give the ration in which the atoms are found in the molecule.

Matter can not be lost in any chemical reactions.

Therefore, we must balance the chemical equation. We adjust the stoichiometric coefficients in front of chemical formula. Subscripts in a formula are never changed.



