



$$\Delta H_r = \Sigma \text{bond enthalpy of bonds broken} - \Sigma \text{bond enthalpy of bonds formed}$$

The energy exchanges between a chemical reaction and its surroundings at a constant pressure is called the **enthalpy change**.

$$\Delta H = \Delta H_{\text{products}} - \Delta H_{\text{reactants}}$$

Standard conditions:

Pressure of 100 kPa (normal atmospheric pressure)

Temperature of 298 K (25 °C)

Reactants are in the normal physical state at 100 kPa and 298 K

Solutions at a concentration of 1 mol/dm³

The minimum energy that colliding reactant particles must possess in order to start a reaction is called **activation energy**.

