

5.2 Hess's law

Understandings:

- The enthalpy change for a reaction that is carried out in a series of steps is equal to the sum of the enthalpy changes for the individual steps.

Applications and skills:

- Application of Hess's Law to calculate enthalpy changes.
- Calculation of ΔH reactions using ΔH_f° data.
- Determination of the enthalpy change of a reaction that is the sum of multiple reactions with known enthalpy changes.

Guidance:

- Enthalpy of formation data can be found in the data booklet in section 12.
- An application of Hess's Law is
$$\Delta H_{\text{reaction}} = \Sigma(\Delta H_f^\circ \text{products}) - \Sigma(\Delta H_f^\circ \text{reactants}).$$