

Exothermic and Endothermic Reactions

Energy movement

- different chemicals store different amounts of energy
- reactions where products with more energy than reactants take in energy from the surroundings
- reactions where products with less energy than reactants give out energy to the surroundings
- The overall amount of energy does not change.

conservation of energy

Exothermic Reaction

- energy transfer to surroundings
- rise in temperature of surroundings
- example 1 : burning fuels
- example 2 : neutralisation reactions
- example 3 : many oxidation reactions
- applications include hand warmers

oxidation of iron in air

and self heating cans

reactions between chemicals in their bases

Endothermic Reaction

- takes in energy
- fall in temperature of surroundings
- example 1 : electrolysis
- example 2 : reaction between sodium carbonate and ethanoic acid
- example 3 : thermal decomposition
- applications include sports injury packs

chemical reaction makes the (outer) pack cooler