

Enthalpy from Your Calorimeter Data

What does the temperature change in your calorimeter actually tell you about the energy released by a chemical reaction?

Reflect on a calorimetry experiment you conducted or observed. Use the equation $Q = mc\Delta T$ to calculate the heat absorbed by water. Then explain what this value represents in terms of the enthalpy change (ΔH). What assumptions did you make, and where might experimental error have affected your result? ([Outcome](#), [Outcome](#), [Outcome](#))

Where to start

- What were the mass and temperature change of the water in your experiment?
- How did you use $Q = mc\Delta T$ to find ΔH ?
- Why is the heat absorbed by water equal to the heat released by the reaction?
- What does the negative or positive sign of ΔH tell you about whether the reaction is endothermic or exothermic?

Stretch

Design an improvement to your calorimeter or experimental method that would reduce the sources of error you identified. Explain how your change would make the measured ΔH more accurate.