

# TA Instruments - a division of Waters Corporation



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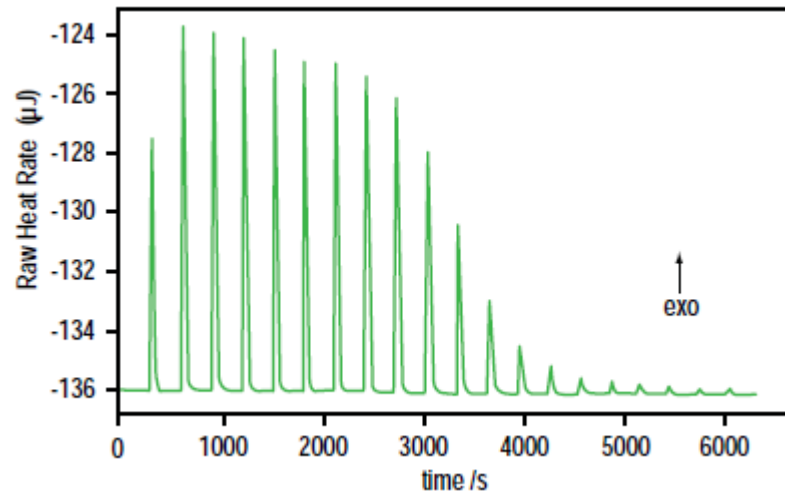


# Instruments for Physical Properties Characterisation of Materials

- **Microcalorimetry**
  - DSC – stability of biomolecules
  - ITC – characterising biomolecule interactions
  - TAM – characterisation of stability, compatibility, microorganism growth, high-throughput screening
- **Thermal Analysis**
  - DSC – Thermal stability of formulations (solid and liquid)
  - Modulated DSC – freeze drying optimisation
  - DVS – effect of moisture on formulations
  - DMA – optimisation of packaging materials
- **Rheology**
  - Optimum viscosity for efficient delivery
  - Optimising formulations

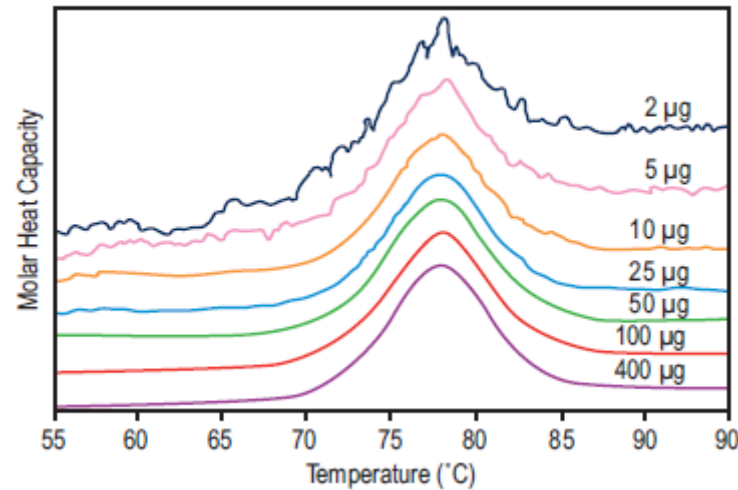
# Key tools for Biopolymer characterisation

## ITC (Isothermal Titration Calorimetry)



- Binding affinities typically  $10^3$ - $10^9$ M<sup>-1</sup>
- Stoichiometry
- Thermodynamics
- Label free samples
- Available in 1ml and 190µl cells
- Auto sampler with 96 well plate format

## DSC (Differential Scanning Calorimetry)



- Thermal Stability
- Heat capacity
- Pressure Perturbation capability as standard
- 0.30ml capillary cells
- Auto sampler with 96 well plate format