

Differential Scanning Calorimetry: First and Second Order Transitions

Name _____

C_p Determination

temp. scan rate ($\partial T/\partial t$) _____ °C/min range _____ mcal/sec

Calibration _____ mV for 10mCal/sec (if you used it)

baseline shift _____ mV baseline shift _____ mcal/sec

C_p (sample and pan) - C_p (ref pan) _____ mcal/K

mass sample _____ mg

mass sample pan & cover _____ mg mass ref. pan & cover _____ mg

Heat capacity of Al per gram _____ J K⁻¹g⁻¹

C_p (sample) _____ cal/K C_p (sample per gram) _____ cal K⁻¹g⁻¹

Glass Transition Change in Heat Capacity Determination

temp. scan rate ($\partial T/\partial t$) _____ °C/min range _____ mcal/sec

Calibration _____ mV for 10mCal/sec (if you used it)

baseline shift _____ mV baseline shift _____ mcal/sec

ΔC_p glass transition _____ cal/K ΔC_p (transition per gram) _____ cal K⁻¹g⁻¹

Melting-Fusion Transition Enthalpy Determination

Calorimetric range _____ mcal/sec

Calibration _____ mV for 10mCal/sec (if you used it)

Integral _____ mV/s Enthalpy for transition _____ cal

mass sample _____ mg Enthalpy per gram _____ cal/g

monomer unit molar mass _____ g/mol monomer

enthalpy per mole of monomer _____ cal/mol monomer