HEAT MEASUREMENTS AND SPECIFIC HEAT OF FUSION

NAME_____ DATE _____ SECTION _____

PARTNER(s)_____

USEFUL CONSTANTS

Latent heat of fusion for water $L_f = 3.33 \times 10^5$ J/kg

Specific heat of water $c_w = 4186$ J/(kg °C)

Specific heat of Styrofoam $c_c = 1311.5$ J/(kg °C)

DO NOT FORGET TO INDICATE UNITS FOR ALL VALUES!!!!

		Value	Units
Mass of Styrofoam Cup	m_c		
Mass of Styrofoam Cup AND water	$m_1 = m_c + m_w$		
Mass of water	$m_w = m_1 - m_c$		
Mass of Styrofoam Cup AND water AND ice	$m_2 = m_c + m_w + m_i$		
Mass of ice	$m_i = m_2 - m_1$		
Initial temperature of the water in the cup (AFTER temperature probe is stabilized)	T_i		
Initial temperature of ice	T_0	0	^oC
Final temperature of the mixture (experimental)	$T_{f,exp}$		
Final temperature of the mixture (calculated by eq.(7))	$T_{f,calc}$		
% difference for , T_f, eq. (8)			
Experimental value for L_f from eq. (6)	$L_{f,exp}$		
% difference for L_f, eq. (8)			