

PHYSICS 1030L

DATA PAGE FOR THE HEAT OF FUSION LAB

Mass of Styrofoam Cup	m_c	(kg)
Mass of Styrofoam Cup + Water	m_{c+w}	(kg)
Mass of water m_w	$m_{c+w} - m_c$	(kg)
$(T_{i,ice} = 0^\circ C)$		
L_f is the Latent heat of fusion for water which is $3.33 \times 10^5 J/kg$		
c_w is the specific heat of water which is $4186 J/(kg \cdot ^\circ C)$		
c_c is the Specific Heat of the Styrofoam cup. $1311.486 J/(kg \cdot ^\circ C)$		
TOTAL MASS	Styrofoam Cup + Water + Ice	(kg)
<i>Mass Ice</i> m_{ice} .	Total Mass - m_w - m_c	(kg)
T_i , temperature after the Stainless Steel Temperature Probe stabilizes		($^\circ C$)_
Final Temperature in Theory $T_{f, theory}$	$\frac{m_w c_w T_i + m_c c_c T_i - m_i L_f}{m_i c_w + m_w c_w + m_c c_c}$	($^\circ C$)_
Final Temperature in Experiment $T_{f, exp}$		($^\circ C$)_
Per cent uncertainty in Mass		
Per cent uncertainty in The Temperature		
ΔQ_{in}		
ΔQ_{out}		
Exp Heat of Fusion		

