$$Q = L_f m \quad \text{— (2)}$$

↳ Latent heat of fusion

Latent heat of vapourisation (L_v):

"The **latent heat of vapourisation** of a substance is the amount of heat given (or taken out) to convert unit mass of a substance from liquid state to vapour state (or from vapour state to liquid state) at its boiling point".

$$Q = L_v \cdot m \quad \text{— (3)}$$

↳ Latent heat of vapourisation

* SI unit of Latent heat = $J\,kg^{-1}$

When 0.15kg of ice at 0^0C is mixed with 0.30kg of water at 50^0C in a container, the resulting temperature is 6.7°C. Calculate the Latent heat of melting of ice. Given, specific heat of water is 4.186×10^3 J kg^{-1} K^{-1}. [Ans: 3.34×10^3 J kg^{-1}]

$m_{ice} = 0.15kg$, $m_{water} = 0.30kg$ at 50°C

$T = 6.7°C$, $L_f = ?$