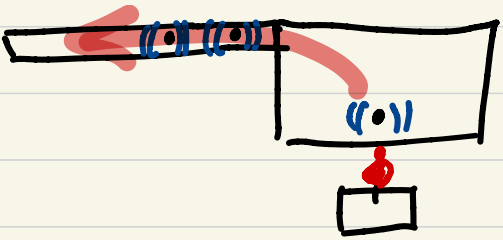
CALORIMETRIA - Ep. III

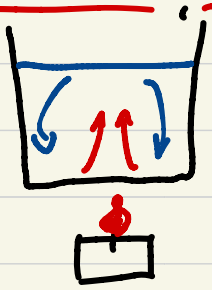
Recordar é viver

Formas de propagação do calor

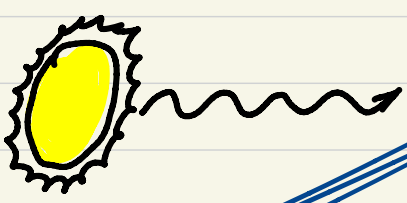
A) Condução



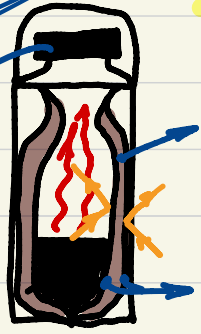
B) Convecção



C) Irradiação.



Grarrafa Térmica.



↔ Tipos de calor.

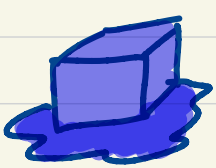
A) Calor sensível

Gera variação de temperatura.

$$Q_S = m \cdot c \cdot \Delta T$$

$$C = \frac{Q_S}{\Delta T} = m \cdot c$$

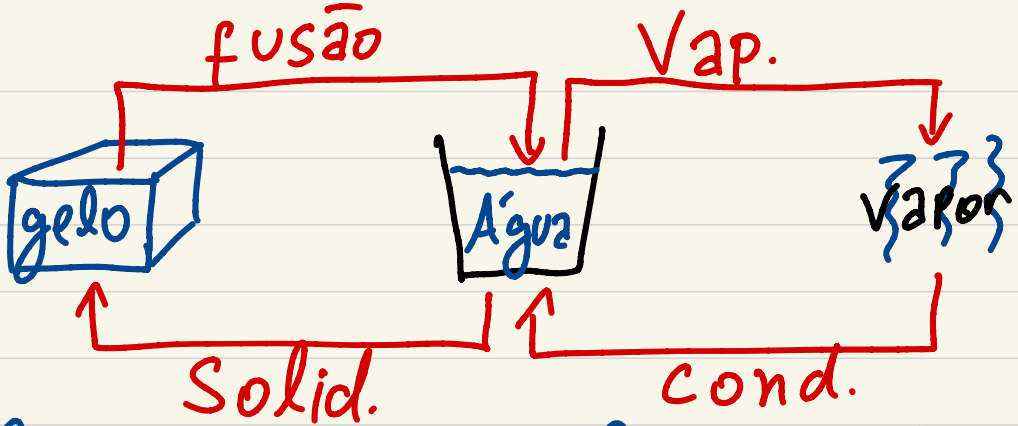
B) Calor latente



É aquele que, cedido ou recebido, gera mudança de estado físico.

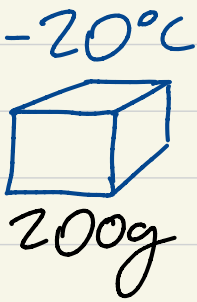
$$Q_L = m \cdot l$$

l → calor específico latente.



$l_F = 80\ cal/g$ $\quad l_{Vap.} = 540\ cal/g$

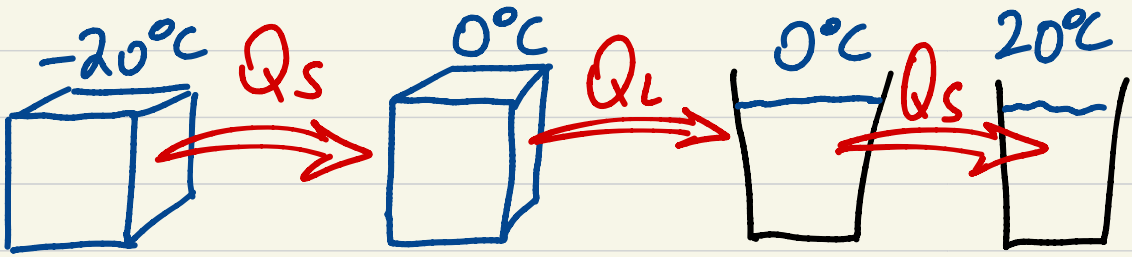
$l_S = -80\ cal/g$ $\quad l_{cond.} = -540\ cal/g$



$c_{Água} = 1{,}0\ cal/g°C$

$c_{gelo} = 0{,}5\ cal/g°C$

$l_{fusão} = 80\ cal/g$



$$Q = \underbrace{m.c.\Delta T}_{GELO} + \underbrace{m.l}_{FUSÃO} + \underbrace{m.c.\Delta T}_{ÁGUA.}$$

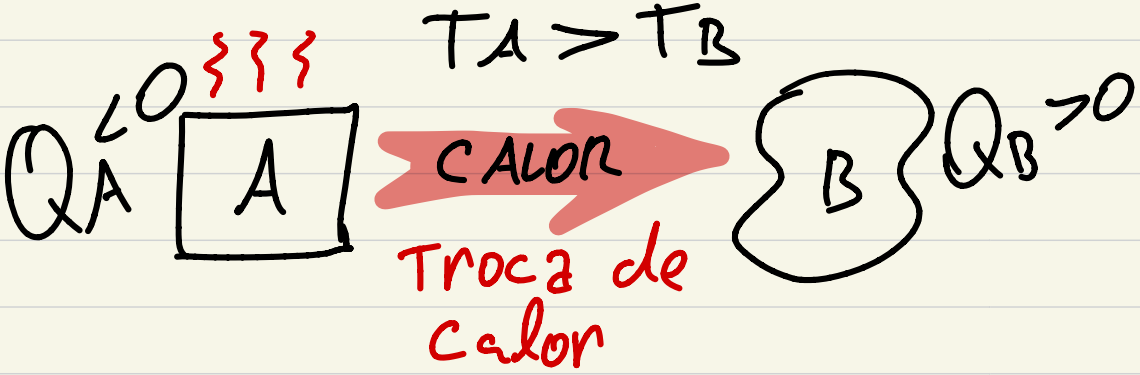
$$Q = 200.0{,}5.20 + 200.80 + 200.1.20$$

$$Q = 2000 + 16000 + 4000$$

$$Q = 22000\ cal \qquad 22\ Cal$$

$$Q = 22\ kcal$$

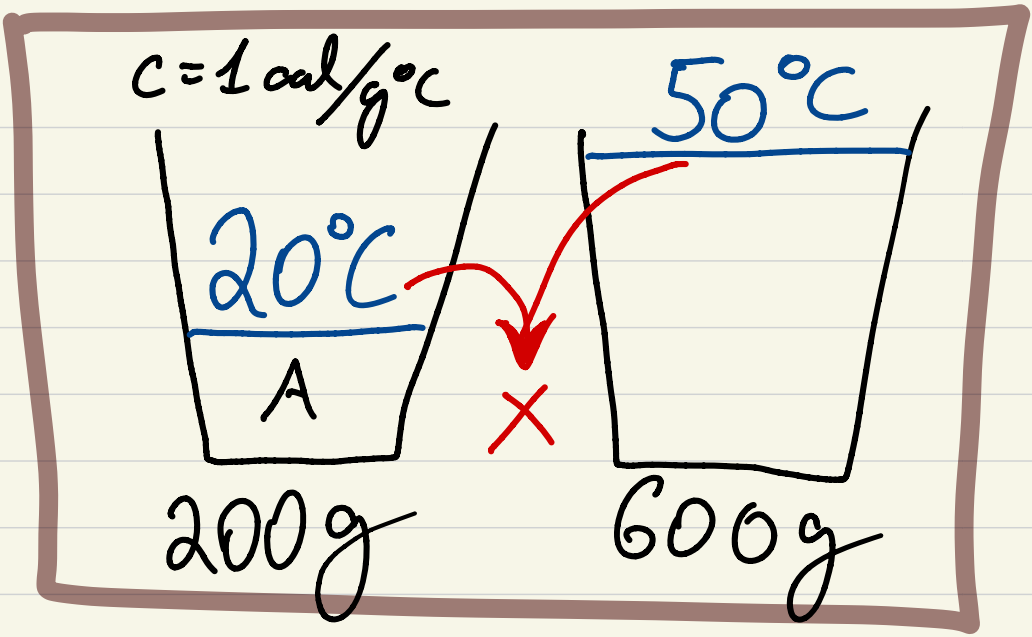
2. EQUILÍBRIO TÉRMICO



CALOR RECEBIDO ⟶ +

CALOR CEDIDO ⟶ −

$$\sum Q_A + Q_B = 0$$



$$Q_A + Q_B = 0$$

$$m.c.\Delta T + m.c.\Delta T = 0$$

$$200.1.(X-20) + 600.1(X-50) = 0$$

$$2X - 40 + 6X - 300 = 0$$

$$8X = 340$$

$$X = \frac{340}{8} = \frac{170}{4} = \frac{85}{2}$$

$$X = 42{,}5\,^{\circ}C$$