- Cálculo del calor específico de la sustancia:

Formula:

$$c_{x_\circ} = \frac{c(M + \pi)(T_f - T_1)}{m_x(T_2 - T_f)}$$

Reemplazando:

$$c_{x_\circ} = \frac{1\frac{cal}{g\,°C}(80\,g + 6g)(24{,}8°C - 20°C)}{79{,}95\,g\,(77{,}5°C - 24{,}5°C)}$$

$$c_{x_\circ} = \frac{1\frac{cal}{g\,°C}(86g)(4{,}8°C)}{79{,}95\,g\,(53°C)}$$

$$c_{x_\circ} = 0{,}0974\,\frac{cal}{g\,°C}$$

- Cálculo del error absoluto del calor específico de la sustancia:

$$\frac{\Delta c_x}{c_{x_\circ}} = \frac{\Delta c}{c_\circ} + \frac{\Delta(M + \pi)}{(M + \pi)_\circ} + \frac{\Delta(T_f - T_1)}{(T_f - T_1)_\circ} + \frac{\Delta m_x}{m_x} + \frac{\Delta(T_2 - T_f)}{(T_2 - T_f)_\circ}$$

$$\Delta c_x = c_{x_\circ}\left[\frac{\Delta M + \Delta\pi}{(M + \pi)_\circ} + \frac{\Delta T_f + \Delta T_1}{(T_f - T_1)_\circ} + \frac{\Delta m_x}{m_x} + \frac{\Delta T_2 + \Delta T_f}{(T_2 - T_f)_\circ}\right]$$

Reemplazando:

$$\Delta c_x = 0{,}0974\,\frac{cal}{g\,°C}\left[\frac{0{,}5g + 4g}{(80g + 6g)_\circ} + \frac{0{,}3°C + 0{,}3°C}{(24{,}8°C - 20°C)_\circ} + \frac{0{,}1g}{79{,}95g} + \frac{0{,}3°C + 0{,}3°C}{(77{,}5°C - 24{,}8°C)_\circ}\right]$$

$$\Delta c_x = 0{,}0974\frac{cal}{g\,°C}\left[\frac{4{,}5g}{(86g)_\circ} + \frac{0{,}6°C}{(4{,}8°C)_\circ} + \frac{0{,}1g}{79{,}95g} + \frac{0{,}6°C}{(52{,}7°C)_\circ}\right]$$

$$\Delta c_x = 0{,}0185\frac{cal}{g\,°C}$$

Redondeo:

$$\Delta c_x = 0{,}0185\frac{cal}{g\,°C} = 0{,}02\frac{cal}{g\,°C}$$

$$c_{x_\circ} = 0{,}0974\frac{cal}{g\,°C} = 0{,}10\frac{cal}{g\,°C}$$

$$c_x = c_{x_\circ} \pm \Delta c_x \quad \Rightarrow \quad \boxed{c_x = 0{,}10\,\frac{cal}{g\,°C} \pm 0{,}02\,\frac{cal}{g\,°C}}$$