

(A)

$$T_{1(\text{amb})} = 17,6^\circ \text{C}$$

$$M_{(\text{amb})} = 80 \text{ g}$$

$$T_{2(\text{cal})} = 78,2^\circ \text{C}$$

$$m_{(\text{cal})} = 49 \text{ g.}$$

$$T_F = 46,6^\circ \text{C.}$$

$$T_0 = -80 + \frac{49(78,2 - 46,6)}{(46,6 - 17,6)}$$

$$= -80 + \frac{49(31,6)}{(29)}$$

$$= -80 + 86,08 \Rightarrow \boxed{T_0 = 6,08}$$

(B)

$$m_x = 49,95 \text{ g} \quad (\text{masa hoja} = 4,15 \text{ g, masa hoja mei sustancia} = 84,10 \text{ g})$$

$$T_{1(\text{amb})} = 20^\circ \text{C}$$

$$M_{(\text{agua})} = 80 \text{ g.}$$

$$T_{2(\text{sust})} = 77,5$$

$$T_F = 24,8.$$

$$C_x = \frac{C(M + T)(T_F - T_1)}{m_x(T_2 - T_F)}$$

$$= \frac{1 \cdot (80 + 6,08)(24,8 - 20)}{49,95(77,5 - 24,8)}$$

$$C = C_x + K$$

$$\left(\frac{1}{1} \right)$$

$$= \frac{(86,08)(4,8)}{49,95(52,7)} = \frac{413,184}{4213,365} = 0,098$$

$$\boxed{C_x = 0,098} \quad \text{cal/g}^\circ \text{C}$$