

$$m_1 \approx 81,342 \text{ [g]} = 81342 \text{ [mg]}$$

$$m_2 \approx 81,524 \text{ [g]} = 81524 \text{ [mg]}$$

$$t = 1800 \text{ [s]}$$

$$l = 0,3 \text{ [A]}$$

$$\Delta m = 0,005 \text{ g} = 5 \text{ mg}$$

$$\Delta t = 2 \text{ s}$$

$$\Delta l = 0,005 \text{ A}$$

$$k = \frac{m_2 - m_1}{l \cdot t} = \frac{81524 - 81342}{0,3 \cdot 1800} = \frac{182}{540} \approx 0,337 \frac{\text{mg}}{\text{C}}$$

$$\Delta k = \left| \frac{\partial k}{\partial m_1} \Delta m_1 \right| + \left| \frac{\partial k}{\partial m_2} \Delta m_2 \right| + \left| \frac{\partial k}{\partial l} \Delta l \right| + \left| \frac{\partial k}{\partial t} \Delta t \right|$$

$$\Delta k = \left| -\frac{1}{l \cdot t} \cdot \Delta m_1 \right| + \left| \frac{1}{l \cdot t} \cdot \Delta m_2 \right| + \left| -\frac{m_2 - m_1}{l^2 \cdot t} \cdot \Delta l \right| + \left| -\frac{m_2 - m_1}{l \cdot t^2} \cdot \Delta t \right|$$

$$\Delta k = \left| -\frac{1}{540} \cdot 5 \right| + \left| \frac{1}{540} \cdot 5 \right| + \left| -\frac{182}{162} \cdot \frac{5}{1800} \right| + \left| -\frac{182}{972000} \cdot 2 \right|$$

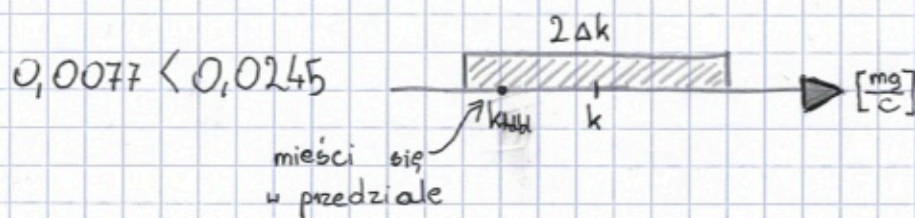
$$\Delta k = \left| -\frac{1}{108} \right| + \left| \frac{1}{108} \right| + \left| -\frac{910}{162000} \right| + \left| -\frac{364}{972000} \right|$$

$$\Delta k = \frac{2}{108} + \frac{910}{162000} + \frac{364}{972000} = \frac{3000}{162000} + \frac{910}{162000} + \frac{364}{972000} = \frac{4 \cdot 18000}{972000} + \frac{5460}{972000} + \frac{364}{972000} = \frac{23824}{972000}$$

$$\Delta k \approx 0,0245 \left[ \frac{\text{mg}}{\text{C}} \right]$$

$$k_{\text{tabl}} = 0,3292997 \approx 0,3293 \left[ \frac{\text{mg}}{\text{C}} \right]$$

$$\text{Rozbieżność} = |k_{\text{tabl}} - k| = |0,3293 - 0,3370| = 0,0077 \left[ \frac{\text{mg}}{\text{C}} \right]$$



## PODSUMOWANIE

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$$k \approx 0,337 \frac{\text{mg}}{\text{C}}$$

$$\Delta k \approx 0,0245 \frac{\text{mg}}{\text{C}}$$

$$\text{rozbieżność} = 0,0077 \frac{\text{mg}}{\text{C}}$$

Ostateczna wartość k:

$$k = (337 \pm 24) \cdot 10^{-3} \left[ \frac{\text{mg}}{\text{C}} \right]$$