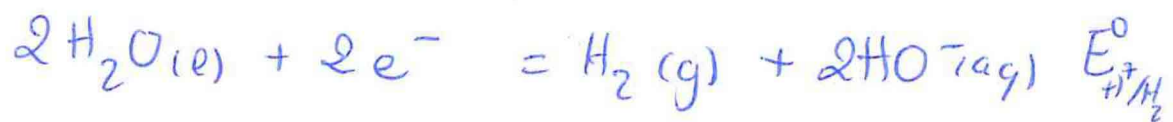


# Synthèse de l'eau de Javel

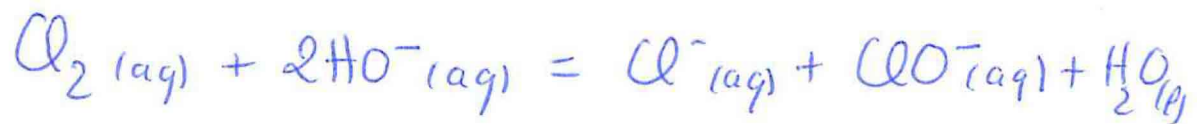
A l'anode =



A la cathode =

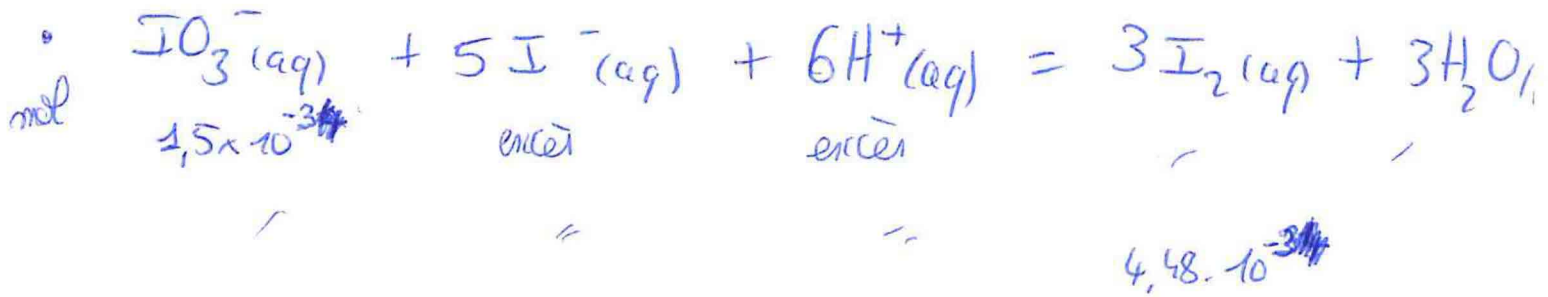


En milieu basique =





# Etalonnage de la solution de thiosulfate



$$[\text{I}_2] = 8,96 \cdot 10^{-2} \text{ mol/L}$$



A l'équivalence =

$$n_{\text{I}_2} = \frac{n_{\text{S}_2\text{O}_3^{2-}}}{2}$$

$$n_{\text{S}_2\text{O}_3^{2-}} = 2 n_{\text{I}_2}$$

$$C_{\text{S}_2\text{O}_3^{2-}} \times V_{\text{eq}} = 2 [\text{I}_2] \times V_{\text{I}_2}$$

$$[\text{S}_2\text{O}_3^{2-}] = \frac{2 \times 8,96 \times 10^{-2} \times 5 \times 10^{-3}}{18,3 \times 10^{-3}}$$

$$[\text{S}_2\text{O}_3^{2-}] = 4,9 \cdot 10^{-2} \text{ mol/L}$$

$$(4,9 \pm 0,1) \cdot 10^{-2} \text{ mol/L} \quad (95\%)$$

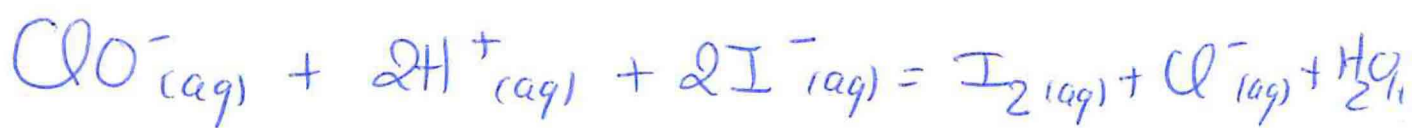


Imcontributiones =

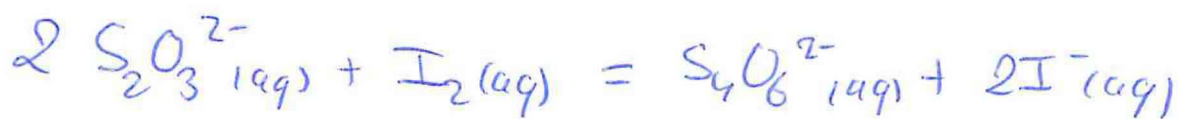
$$\begin{aligned} \alpha[\text{CO}_3^{2-}] &= [\text{CO}_3^{2-}] \left[ \frac{\nu(\text{S}_2\text{O}_3^{2-})}{[\text{S}_2\text{O}_3^{2-}]} + \frac{\nu(\text{CO}_3^{2-})}{\nu_{\text{CO}_3^{2-}}} + \frac{\nu(\text{Veq})}{\nu_{\text{Veq}}} \right] \\ &= 2,25 \cdot 10^{-2} \left[ \left( \frac{0,1}{4,9} \right)^2 + \left( \frac{0,02}{10,00} \right)^2 + \left( \frac{0,1}{9,2} \right)^2 \right]^{\frac{1}{2}} \\ &= 5,2 \cdot 10^{-4} \text{ mol/L} \end{aligned}$$



# Titrage de l'eau de Javel



Equation du titrage =



A l'équivalence =

$$n_{\text{I}_2(aq)} = \frac{n_{\text{S}_2\text{O}_3^{2-}(aq)}}{2}$$

$$\therefore n_{\text{I}_2} = \frac{[\text{S}_2\text{O}_3^{2-}] \times V_{\text{eq}}}{2}$$

$$n_{\text{I}_2} = \frac{4,9 \cdot 10^{-2} \times 9,2 \cdot 10^{-3}}{2}$$

$$n_{\text{I}_2} = 2,25 \cdot 10^{-4} \text{ mol}$$

Or  $n_{\text{I}_2} = n_{\text{ClO}^-}$  donc  $C_{\text{ClO}^-} = \frac{2,25 \cdot 10^{-4}}{10 \cdot 10^{-3}}$

$V = 9,1 \text{ mL}$   $[\text{ClO}^-] = 2,25 \cdot 10^{-2} \text{ mol/L}$   $\rightarrow \Gamma_{\text{ClO}^-} = (2,25 \pm 0,05) \cdot 10^{-2}$

