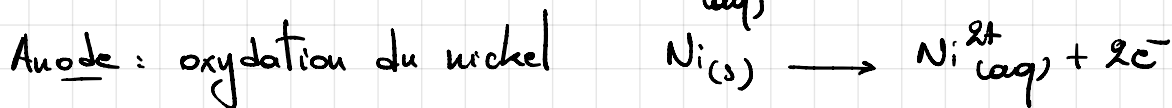
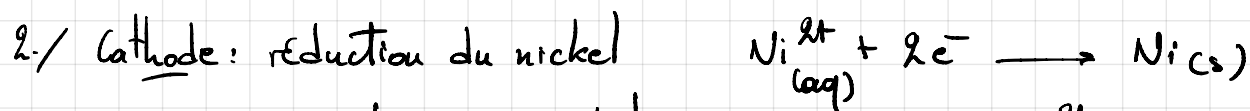
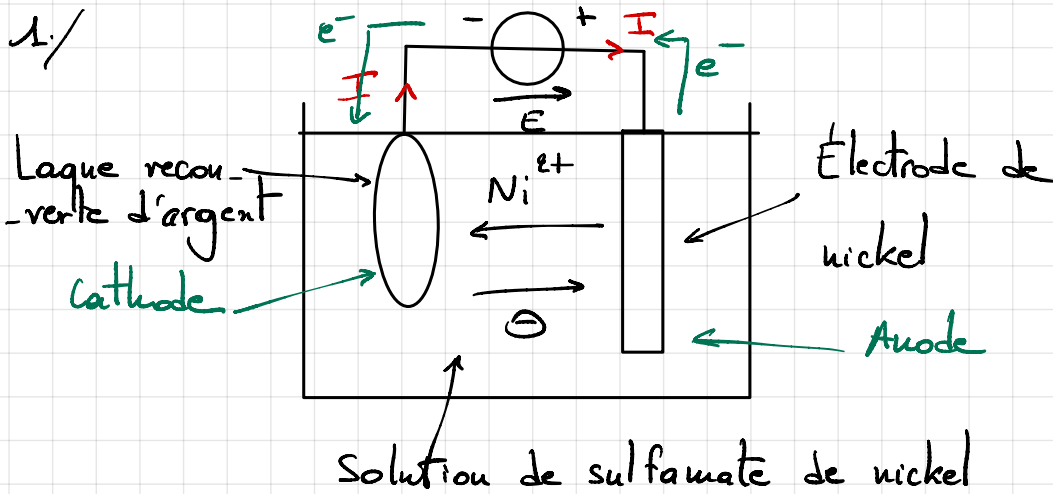


## 32- Retour du disque vinyle



3./  $m = \rho V = \rho \pi r^2 e = \rho \pi \left(\frac{D}{2}\right)^2 e$

AN  $m = 8,90 \text{ g} \cdot \text{cm}^{-3} \times \pi \times \left(\frac{30,0}{2} \text{ cm}\right)^2 \times 2,00 \times 10^{-2} \text{ cm} = 1,26 \times 10^2 \text{ g}$

4./  $n(\text{Ni}) = \frac{m(\text{Ni})}{M(\text{Ni})}$  AN  $n(\text{Ni}) = \frac{1,26 \times 10^2 \text{ g}}{58,7 \text{ g} \cdot \text{mol}^{-1}} = 2,14 \text{ mol}$

5./

Etat	Av	$\text{Ni}_{(\text{aq})}^{2+} + 2\text{e}^- \longrightarrow \text{Ni}_{(\text{s})}$			À la cathode
Initial	0	$n_0$	$n(\text{e}^-)$	0	
Final	$x_f$	$n_0 - x_f$	$n(\text{e}^-) - 2x_f = 0$	$x_f$	

chimie

$$n(\text{Ni}) = x_f = \frac{n(\text{e}^-)}{2} \text{ donc } \boxed{n(\text{e}^-) = 2 n(\text{Ni})}$$

$$Q = I \times \Delta t = n(\text{e}^-) \times F \Leftrightarrow \boxed{I = \frac{n(\text{e}^-) F}{\Delta t}}$$

Electricité

Finalement  $\boxed{I = \frac{2 n(\text{Ni}) F}{\Delta t}}$

AN  $I = \frac{2 \times 2,14 \text{ mol} \times 9,65 \times 10^4 \text{ C} \cdot \text{mol}^{-1}}{3600 \text{ s}} = 115 \text{ A}$