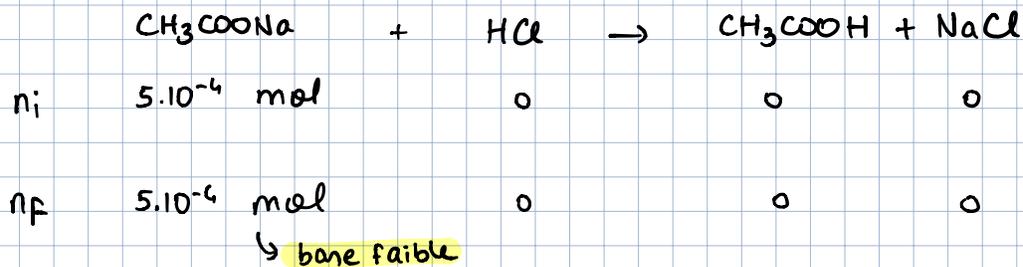


## Titration de mélange tampon

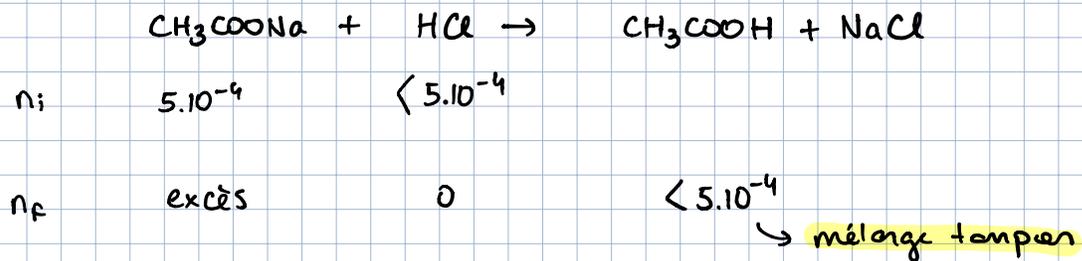
À 0 mL



$$n_{\text{CH}_3\text{COONa}} = 0,02 \times 25 \cdot 10^{-3} = 5 \cdot 10^{-4} \text{ mol}$$

$$\text{pH} = \frac{14 + 4,75 + \log\left(\frac{5 \cdot 10^{-4}}{25 \cdot 10^{-3}}\right)}{2} = 8,52$$

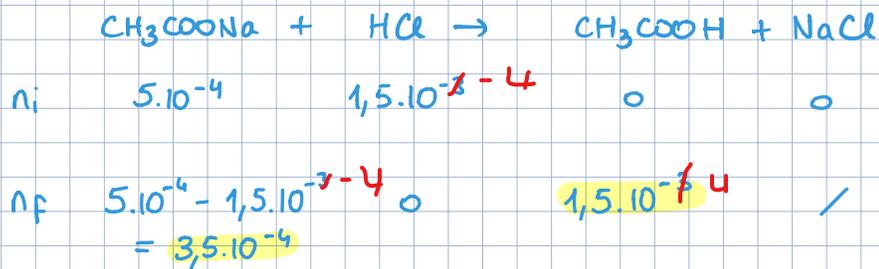
De 1 à 9,8 mL



$$n_{\text{HCl}} = 0,05 \times V_{\text{ajouté}} = < 5 \cdot 10^{-4}$$

$$\text{pH} = 4,75 + \log\left(\frac{\text{excès} - (< 5 \cdot 10^{-4})}{(25 + V_{\text{ajouté}}) \cdot 10^{-3}}\right)$$

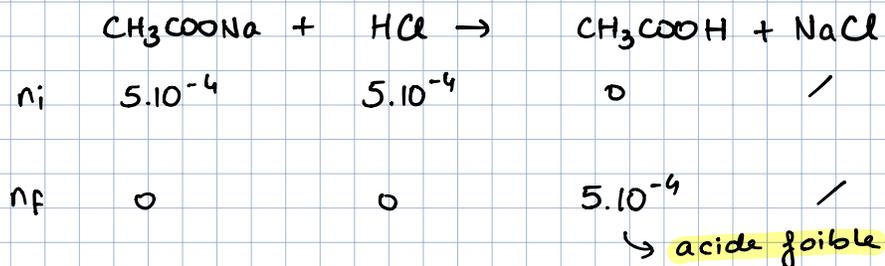
Exemple: à 3 mL:



$$n_{\text{HCl}} = 0,05 \times 3 \cdot 10^{-3} = 1,5 \cdot 10^{-4} \text{ mol}$$

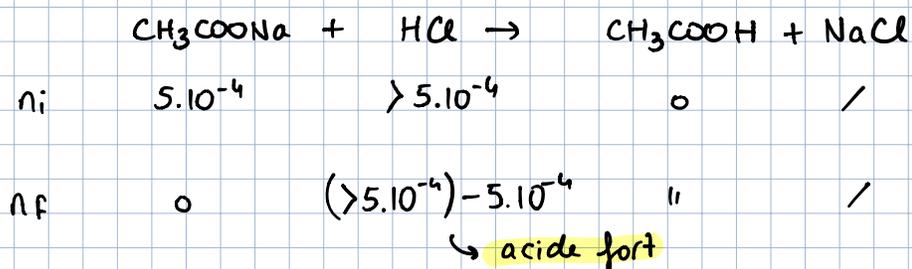
$$\text{pH} = 4,75 + \log \left( \frac{3,5 \cdot 10^{-4}}{1,5 \cdot 10^{-2-4}} \right) = 4,11$$

À 10 mL



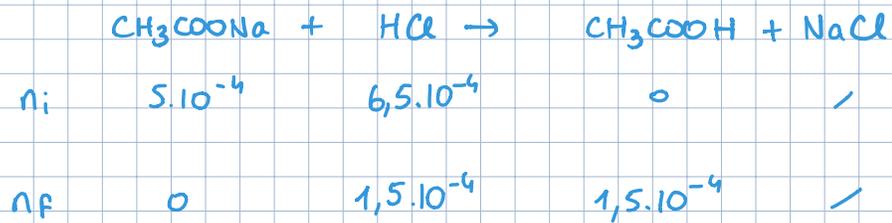
$$\text{pH} = \frac{4,75 - \log \left( \frac{5 \cdot 10^{-4}}{(25+10) \cdot 10^{-3}} \right)}{2} = 3,3$$

De 10,2 à 15 mL



$$pH = -\log \left( \frac{n_{\text{HCl}}}{(25 + V_{\text{ajouté}}) \cdot 10^{-3}} \right)$$

Exemple à 13 mL



$$\rightarrow pH = -\log \left( \frac{1,5 \cdot 10^{-4}}{(25 + 13) \cdot 10^{-3}} \right) = 2,4$$