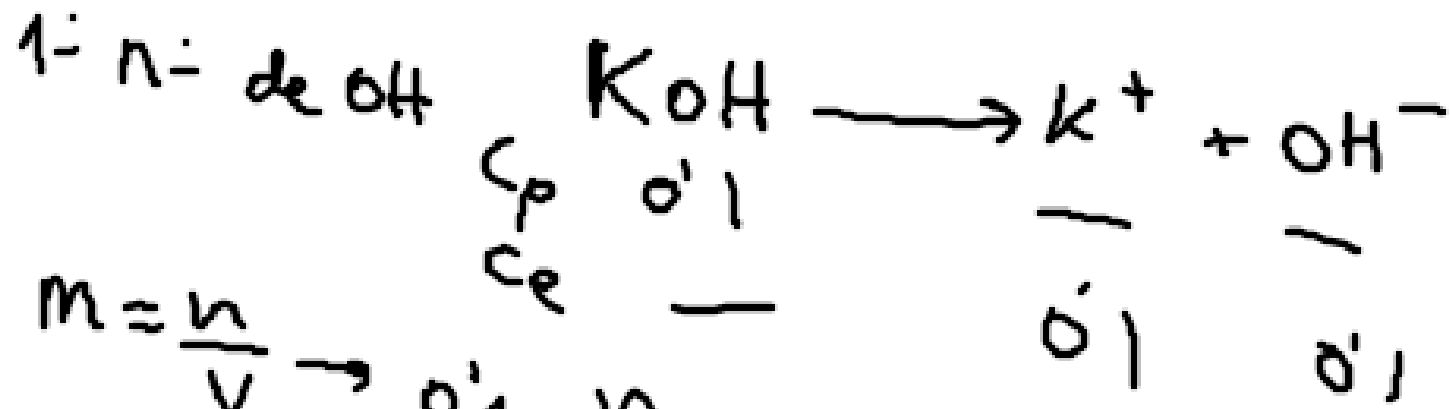
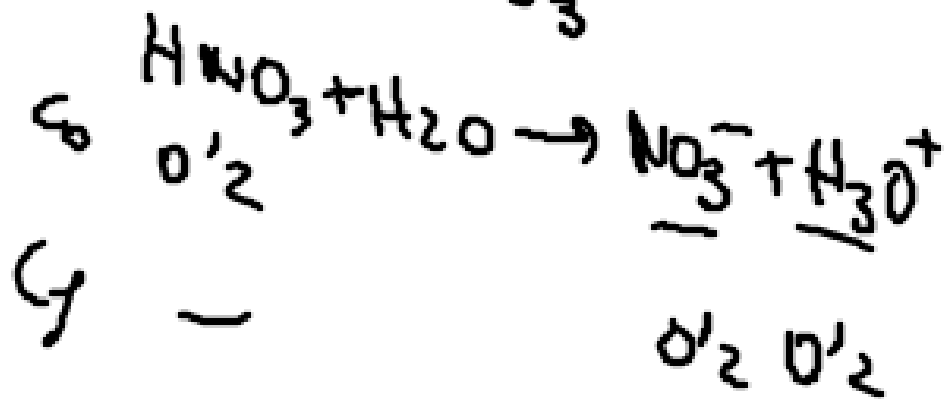


1) 250 ml de 0.1 M de KOH
 200 ml de 0.2 M de HNO₃



$$n = \frac{m}{V} \rightarrow 0.1 = \frac{n}{0.25} \rightarrow n = 0.25 \cdot 0.1 = 0.025 \text{ moles de OH}^-$$

2- n: de HNO₃



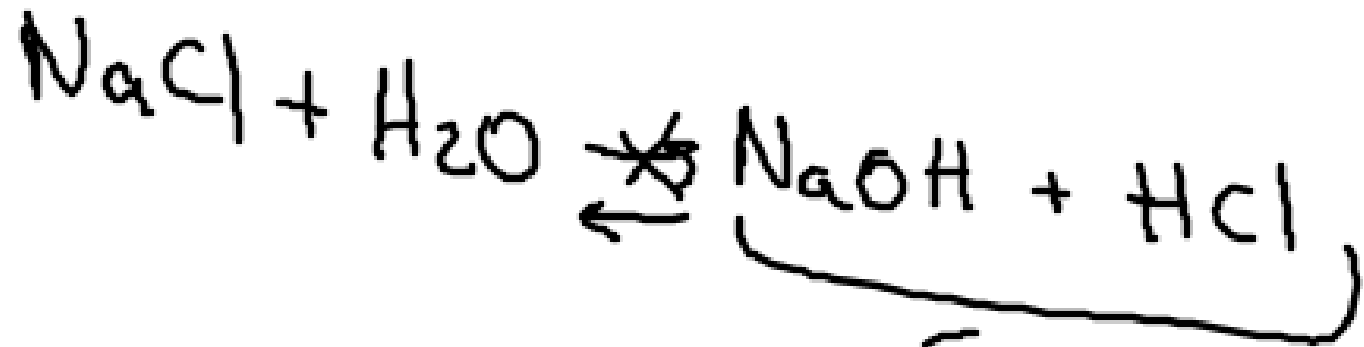
$$n = m \cdot V = 0.2 \cdot 0.2 = 0.04 \text{ moles de H}^+$$

Tengo 0.025 de OH^-
0.04 de H^+ } Sobran
 $0.04 - 0.025 = 0.015$ mols
de H^+

$$\text{pH} = -\log[\text{H}^+] = -\log[0.033] = \underline{\underline{1.47}}$$

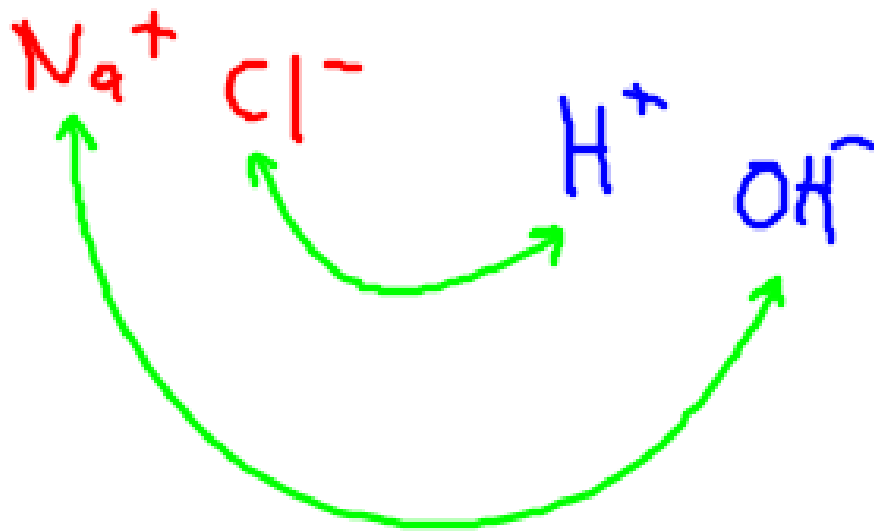
$$[\text{H}^+] = \frac{n}{V_{\text{total}}} = \frac{0.015}{0.2 + 0.25} = \frac{0.015}{0.45} = 0.033 \text{ M}$$

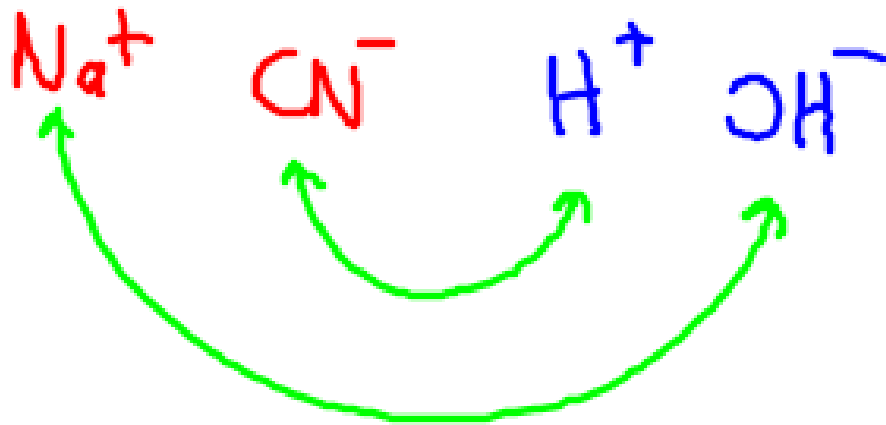
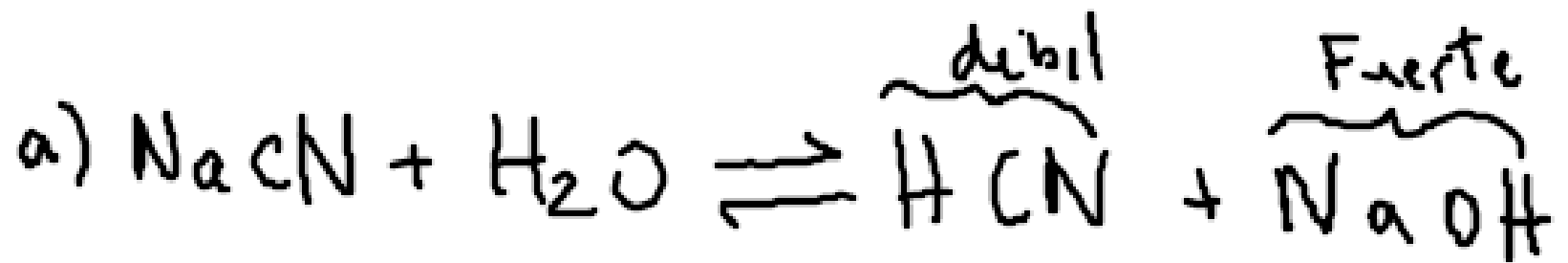
26) Hidrolisis \rightarrow separación de la sal en agua.



Fuertes

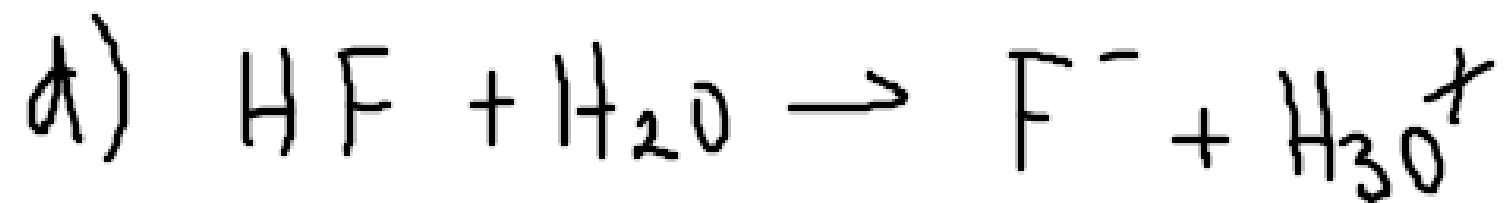
No hay en la
disolución



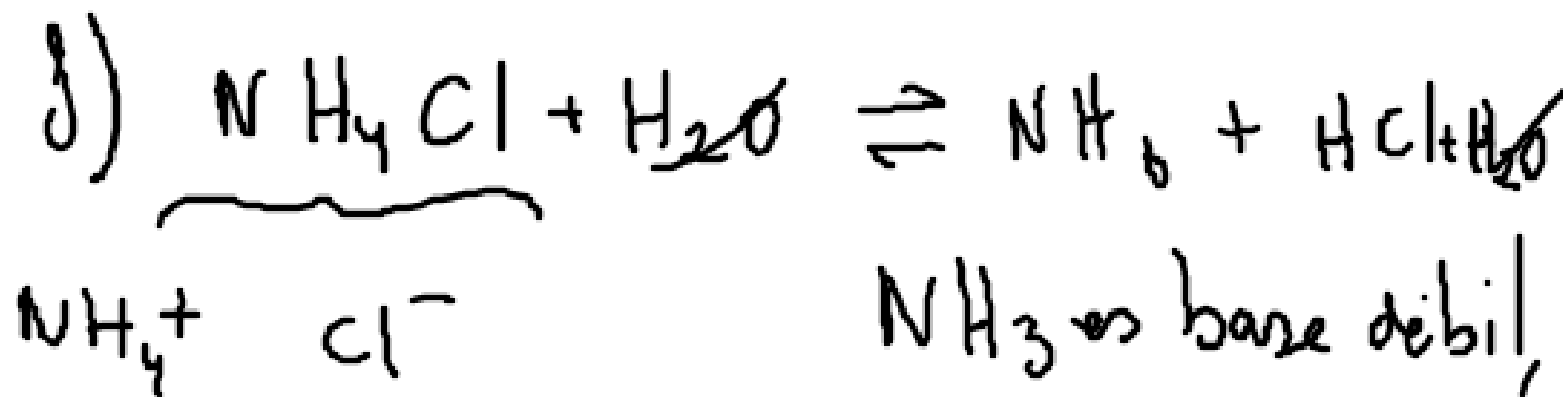


Se forma HCN , se gastan H^+ , hay más OH^- .

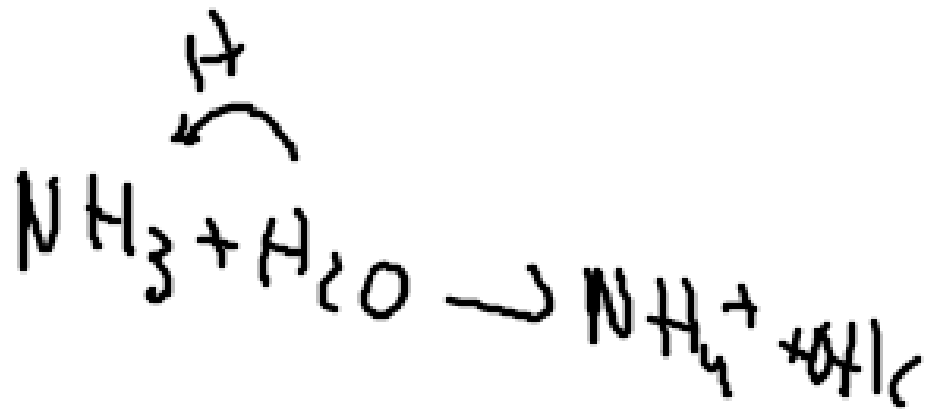
Disolución es básica

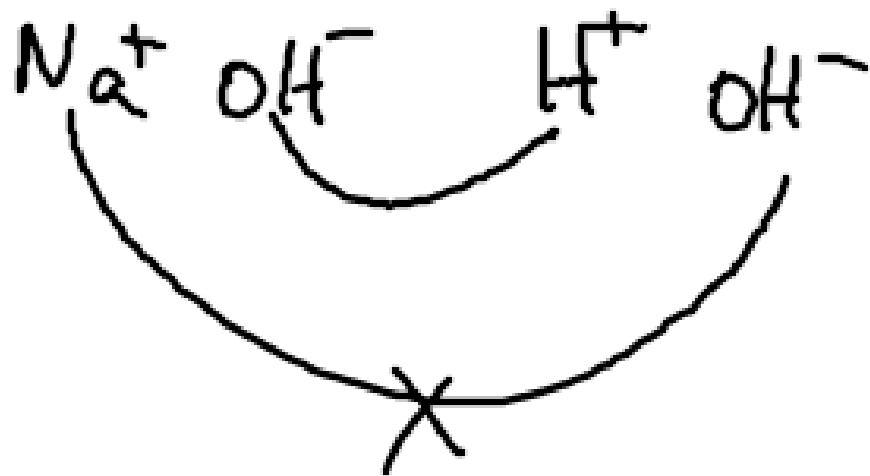


Ácido.



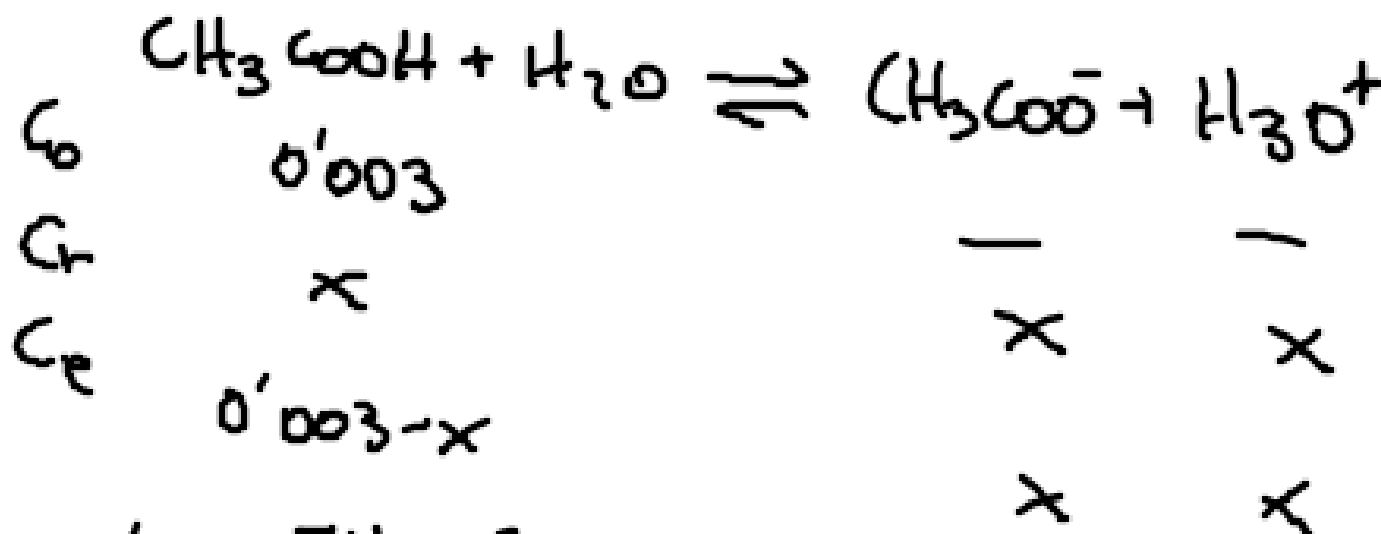
Disolución a'cida.





$$K_a = 1.77 \cdot 10^{-5}$$

$$7) \quad pK_a = 4.75 \rightarrow K_a = 10^{-pK_a} = 10^{-4.75}$$



$$K_a = \frac{[\text{H}_3\text{O}^+] \cdot [\text{CH}_3\text{COO}^-]}{[\text{CH}_3\text{COOH}]}$$

$$1.77 \cdot 10^{-5} = \frac{x^2}{0.003 - x}, \quad K \downarrow \downarrow$$

$$1'78 \cdot 10^{-5} = \frac{x^2}{0'003} \rightarrow 0'003 \cdot 1'78 \cdot 10^{-5} = x^2$$

$$x^2 = 5'34 \cdot 10^{-9} \rightarrow x = \sqrt{5'34 \cdot 10^{-9}} = 2'31 \cdot 10^{-4}$$

$$[H_3O^+] = 2'31 \cdot 10^{-4}$$

$$pH = -\log [H_3O^+] = -\log(2'31 \cdot 10^{-4}) = 3'6$$

Reacciones Redox

Oxidación-Reducción: ceder electrones, y otra aceptar e^- .

Clave: en las reacciones los elementos varían su n.º de oxidación (valencia)

