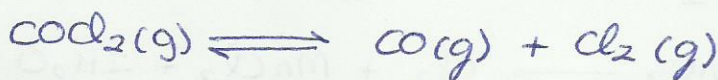


OPCIÓN (A) PROBLEMAS

(A4)



$$V = 1 \text{ l}$$

$$P = 0.92 \text{ atm}$$

$$T = 500 \text{ K}$$

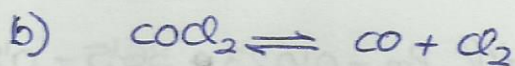
a) CC inicial COCl_2

$$P \cdot V = n \cdot R \cdot T$$

$$0.92 \cdot 1 = n_0 \cdot 0.082 \cdot 500$$

$$n_0 = 0.022$$

$$\boxed{[\text{COCl}_2]_0 = 0.022 \text{ M}}$$



to 0.022

teq 0.022 - x

- -

x x

$$K_c = \frac{x^2}{0.022 - x}$$

$$4.63 \cdot 10^{-3} = \frac{x^2}{0.022 - x}$$

$$1.02 \cdot 10^{-4} - 4.63 \cdot 10^{-3} x = x^2$$

$$x^2 + 4.63 \cdot 10^{-3} x - 1.02 \cdot 10^{-4} = 0 \begin{cases} \rightarrow 8.05 \cdot 10^{-3} \\ \rightarrow -0.01 \end{cases}$$

$$[\text{CO}] = [\text{Cl}_2] = 8.05 \cdot 10^{-3} \text{ M}$$

$$[\text{COCl}_2] = 0.022 - 8.05 \cdot 10^{-3} = 0.014 \text{ M}$$

c) $P_{\text{CO}} = P_{\text{Cl}_2} = 8.05 \cdot 10^{-3} \cdot 0.082 \cdot 500 = \boxed{0.33 \text{ atm}}$

$$P_{\text{COCl}_2} = 0.014 \cdot 0.082 \cdot 500 = \boxed{0.574 \text{ atm}}$$