

Donde

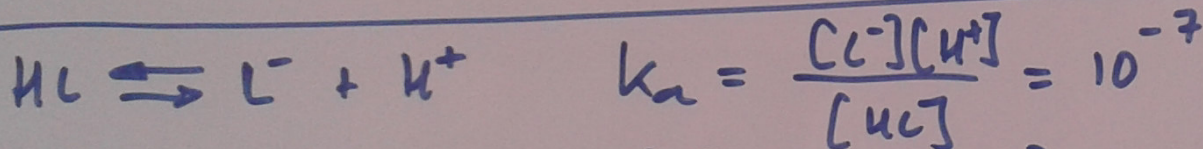
$$K_d = \frac{[\text{Fe}^{3+}][\text{L}^-]}{[\text{FeL}^{2+}]} = 10^{-8}$$

$$[\text{FeL}^{2+}] + [\text{L}^-] + [\text{HL}] = 0,1 \text{ M (Dato)}$$

$$[\text{Fe}^{3+}] = 6,23 \cdot 10^{-6} \text{ M (apartado a)}$$

$$[\text{Fe}^{3+}] + [\text{FeL}^{2+}] = 10^{-2} \text{ M}$$

$$[\text{L}^-] = K_d \frac{[\text{FeL}^{2+}]}{[\text{Fe}^{3+}]} = 10^{-8} \cdot \frac{10^{-2}}{6,23 \cdot 10^{-6}} = 0,16 \cdot 10^{-4} \text{ M}$$



$$\text{Donde } [\text{HL}] = 0,1 - [\text{FeL}^{2+}] - [\text{L}^-] = 0,1 - 10^{-2} - 0,16 \cdot 10^{-4} = 0,49 \text{ M}$$

$$[\text{H}^+] = K_a \frac{[\text{HL}]}{[\text{L}^-]} = 10^{-7} \cdot \frac{0,49}{0,16 \cdot 10^{-4}} = 3,1 \cdot 10^{-3} \Rightarrow \boxed{\text{pH} = 2,51}$$

pH mínimo para que el Fe^{3+} no reaccione.