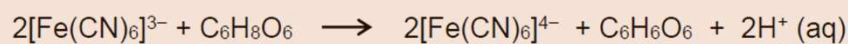
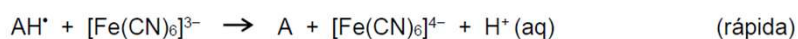
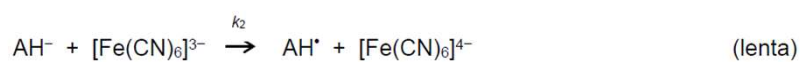


PHYSCHEMlab_#06

Reaction:



Mechanism:



Kinetics:

$$-\frac{d[\text{Fe}(\text{CN})_6]^{3-}}{dt} = \frac{2k_1k_2[\text{AH}_2][\text{Fe}(\text{CN})_6]^{3-}}{k_{-1}[\text{H}^+] + k_2[\text{Fe}(\text{CN})_6]^{3-}}$$

$$-\frac{d[\text{Fe}(\text{CN})_6]^{3-}}{dt} = \frac{2k_1k_2[\text{AH}_2][\text{Fe}(\text{CN})_6]^{3-}}{k_{-1}[\text{H}^+]}$$

$$-\frac{d[\text{Fe}(\text{CN})_6]^{3-}}{dt} = k' \frac{[\text{AH}_2][\text{Fe}(\text{CN})_6]^{3-}}{[\text{H}^+]}$$

com $k' = 2k_1k_2 / k_{-1}$, e

$$-\frac{d[\text{Fe}(\text{CN})_6]^{3-}}{dt} = k[\text{AH}_2][\text{Fe}(\text{CN})_6]^{3-}$$

sendo $k = k' / [\text{H}^+]$.

como um processo de pseudo 2ª ordem do tipo



a que corresponde uma lei de velocidade de fórmula geral

$$\ln \frac{[\text{A}]_t}{[\text{B}]_t} = \frac{b[\text{A}]_0 - a[\text{B}]_0}{a} k t + \ln \frac{[\text{A}]_0}{[\text{B}]_0}$$

em que A é o reagente limitante.