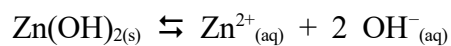


Problema 749: Cal é o pH dunha disolución saturada de hidróxido de zinc se o seu K_s a 25°C é de $1,2 \cdot 10^{-17}$?

a) Partimos do equilibrio de solubilidade do $\text{Zn}(\text{OH})_2$.



[Inic]

[Eq]

s

2s

$$K_s = [\text{Zn}^{+2}] \cdot [\text{OH}^{-1}]^2 = s \cdot (2s)^2 = 4s^3 = 1,2 \cdot 10^{-17}$$

$$s = \sqrt[3]{\frac{1,2 \cdot 10^{-17}}{4}} = 1,44 \cdot 10^{-6} \frac{\text{mol}}{\text{L}}$$

$$pOH = -\log[\text{OH}^{-1}] = -\log 2s = -\log(2 \cdot 1,44 \cdot 10^{-6}) = -\log 2,88 \cdot 10^{-6} = 5,54$$

$$pH = 14 - pOH = 14 - 5,54 = \underline{8,46}$$