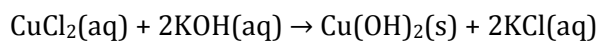


How many grams of $\text{Cu}(\text{OH})_2$ will precipitate when excess KOH solution is added to 54.0 mL of 0.572 M CuCl_2 solution?



CuCl_2 quantity:

$$n_{\text{CuCl}_2} = C_{\text{CuCl}_2} \cdot V_{\text{CuCl}_2} = 0.572 \cdot 0.054 \cdot 10^{-3} = 0.3088 \cdot 10^{-3} \text{ moles}$$

According to reaction stoichiometry $n_{\text{CuCl}_2} = n_{\text{Cu}(\text{OH})_2}$

Then $\text{Cu}(\text{OH})_2$ mass:

$$m_{\text{Cu}(\text{OH})_2} = n_{\text{Cu}(\text{OH})_2} \cdot M_{\text{Cu}(\text{OH})_2} = 0.3088 \cdot 10^{-3} \cdot 97.561 = 0.03 \text{ g}$$