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Solution: In this type of problem we can calculate the number of moles of solvent in 1 L, which we already know is 55.6 moles for H_2O . Then we can calculate the number of moles of CuSO_4

$$n_2 = c_2(1 \text{ L}) = (4.3 \text{ M})(1 \text{ L}) = 4.3 \text{ mol}$$

Thus, we can calculate

$$x_{\text{CuSO}_4} = \frac{n_{\text{CuSO}_4}}{n_{\text{CuSO}_4} + n_{\text{H}_2\text{O}}} = \frac{4.3}{4.3 + 55.6} = 0.071$$