



$$P_{\text{total}} = P_{\text{O}_2} + P_{\text{H}_2\text{O}} = P_{\text{O}_2} + 21 \text{ torr} = 760 \text{ torr}$$

$$P_{\text{O}_2} = 739 \text{ torr} \cdot \frac{1 \text{ atm}}{760 \text{ torr}} = 0.972 \text{ atm}$$

$$n_{\text{O}_2} = \frac{0.972 \text{ atm} \cdot 1.20 \text{ L}}{\frac{0.08206 \text{ L} \cdot \text{atm}}{\text{mol} \cdot \text{K}} \cdot 295 \text{ K}} = 4.82 \cdot 10^{-2} \text{ mol O}_2$$

$$4.82 \cdot 10^{-2} \text{ mol O}_2 \cdot \frac{2 \text{ mol KClO}_3}{3 \text{ mol O}_2} = 3.21 \cdot 10^{-2} \text{ mol KClO}_3$$

$$3.21 \cdot 10^{-2} \text{ mol KClO}_3 \cdot \frac{122.6 \text{ g KClO}_3}{1 \text{ mol KClO}_3} = 3.94 \text{ g KClO}_3$$

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