

## Answer on Question #82660 – Chemistry – General Chemistry

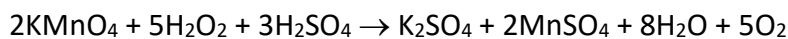
Most hydrogen peroxide bottles advertise that they contain 3% H<sub>2</sub>O<sub>2</sub>. What did you find in your experiment?

- a) This cannot be determined via the methods here
- b) New H<sub>2</sub>O<sub>2</sub> solution does indeed contain 3% H<sub>2</sub>O<sub>2</sub>
- c) New H<sub>2</sub>O<sub>2</sub> solution contains more than 3% H<sub>2</sub>O<sub>2</sub>
- d) New H<sub>2</sub>O<sub>2</sub> solutions contains less than 3% H<sub>2</sub>O<sub>2</sub>

### **Solution:**

Concentration of H<sub>2</sub>O<sub>2</sub> by mass = 3.0 g of H<sub>2</sub>O<sub>2</sub> in 100 g (100 mL) of solution

$$n(\text{H}_2\text{O}_2) = 3.0 \text{ g} / 34.01 \text{ g/mol} = 0.088 \text{ mol}$$



$$n(\text{KMnO}_4) = 2 \text{ mol}; n(\text{H}_2\text{O}_2) = 5 \text{ mol}$$

$$n(\text{KMnO}_4) = C(\text{KMnO}_4) \times V(\text{KMnO}_4)$$

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