

Question #82877, Chemistry / General chemistry

A 35.2 mL, 1.88 M KMnO<sub>4</sub> solution is mixed with 16.7 mL of 0.892 M KMnO<sub>4</sub> solution. Calculate the concentration of the final solution.

**Solution**

$$n = V \cdot c$$

$$n_1 = 35.2 \cdot 1.88 = 66.18 \text{ (mmol)}$$

$$n_2 = 16.7 \cdot 0.892 = 14.9 \text{ (mmol)}$$

$$c' = n' / V' = (66.18 + 14.9) / (35.2 + 16.7) = 1.55 \text{ M}$$

**Answer**

New concentration is 1.55 M

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