

Answer on Question #59843, Chemistry / General Chemistry

0.02 M of potassium manganate

0.1 M and 25 cm³ of iron sulfate was oxidized by 24.6 cm³ of manganate.
Calculate molarity of manganate.



$$C_m = \frac{n}{V}$$

$$n = C_m \cdot V$$

$$n(\text{FeSO}_4) = 0.1 \cdot 0.025 = 0.0025$$

$$n(\text{KMnO}_4) = \frac{n(\text{FeSO}_4) \cdot 2}{10} = 0.0005 \text{ mol}$$

$$C_m(\text{KMnO}_4) = \frac{0.0005 \text{ mol}}{0.0246 \text{ L}} = 0.02 \text{ M}$$