

Answer on Question 74831 in General Chemistry

$$C_{M1}(\text{NaOH})=0.15 \text{ M}$$

$$V_1=100 \text{ mL}$$

$$V_2=25 \text{ mL}$$

$$C_{M2}=?$$

Solution: Let's find the quality of substance of NaOH in the first solution

$$C_{M1} = \frac{n(\text{NaOH})}{V_1} \quad n(\text{NaOH})=C_{M1} \times V_1=0.15 \times 0.1=0.015 \text{ mol (we translated mL into L)}$$

$$C_{M2} = \frac{n(\text{NaOH})}{V_2} = \frac{0.015}{0.025}=0.6 \text{ M}$$

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