

Strong Acid + Strong Base

0.1 M HCl

0.1 M NaOH

25.0 mL

20.0 mL

$2.5 \times 10^{-3} \text{ mol} - 2.0 \times 10^{-3} \text{ mol} = 0.5 \times 10^{-3} \text{ mol}$

$$V = 25 + 20 \text{ mL}$$

$$[\text{H}^+] = \frac{0.5 \times 10^{-3} \text{ mol}}{45 \times 10^{-3} \text{ L}}$$

$$[\text{H}^+] = 1.11 \times 10^{-2} \text{ M}$$

$$\text{pH} = 1.95$$

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