

A 0.2512 g piece antacid was dissolved in 35.25 mL of 0.1008 M HCl and then the excess HCl was titrated to the equivalence point with 10.25 mL of 0.15 M NaOH. How many moles of NaOH were required to neutralize the HCl that remained after it had reacted with the tablet?

- 1.5 moles
- 0.0036 moles
- 0.0015 moles
- 3.6 moles

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[Next page](#)

ii) moles of HCl react with NaOH:

$$0.15 \times 0.01025 = 0.00154 \text{ mol} = \text{moles of NaOH}$$

A student dissolved 0.15 g sample of antacid in 15.0 mL of 0.30 M HCl solution, then back titrated the mixture to the end point with 10.0 mL of 0.25 M NaOH solution. Calculate the neutralizing capacity of antacid

- 5.0×10^{-3} mol/g
- 1.3×10^{-2} mol/g
- 3.3×10^{-3} mol/g
- 6.0×10^{-3} mol/g
- 4.0×10^{-3} mol/g

Next page



2] moles of HCl react with NaOH:

$$0.01 \times 0.25 = 0.0025 \text{ mol}$$

moles of HCl added:

$$0.015 \times 0.3 = 0.0045 \text{ mol}$$

$$C = \frac{0.0045 - 0.0025}{0.15} = \underline{0.013 \text{ mol/g}}$$

A 0.2512 g piece antacid was dissolved in 35.25 mL of 0.10 M HCl and then the excess HCl was titrated to the equivalence point with 10.25 mL of 0.15 M NaOH. How many moles of HCl did the antacid neutralize?

- 2.0100 moles
- 1.5400 moles
- 3.5500 moles
- 0.0020 moles

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[Next page](#)

3] moles of HCl neutralized : $(0.03525 \times 0.1) - (0.15 \times 0.0125)$
 $= 0.0020 \text{ mol}$