

Titration of 0.1M hydrochloric acid (HCl) with sodium hydroxide (NaOH)

- *A burette is filled with the acid solution of known molarity.

- *several drops of an indicator are added to the base and mixed by swirling the flask

- *The stopcock of the burette is opened and acid is slowly added to the base while the flask is constantly swirled to insure mixing

- *The stopcock is closed at the exact point at which the indicator just changes color

- *The end point of a titration is the point at which the indicator changes color

- *When phenolphthalein the indicator, the end point will be signified by colorless

Titration calculations

At the equivalence point in a neutralization ,

The moles of acid are equal to the moles of base

$$\text{moles acid} = \text{moles base}$$

$$M \times V = M \times V$$

Acid base

