Titrations

Titration is a method to find the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an unknown.

Unknown =

Titrant=

HCl + NaOH 🡪 H2O + NaCl



The

Tt

The equivalence point occurs when moles of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = moles of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The endpoint occurs when \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Phenolphthalein is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in acidic solution and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in basic solution.

Example: It took 25.0 ml of a 1.50 M NaOH solution to neutralize 10.0 ml of an HCl solution. What is the concentration of the HCl solution?

Example #2: 20.0 ml of a solution of H2SO4 was titrated with 1.50 M NaOH. It took 3.12 ml of the NaOH solution to reach the endpoint. What was the concentration of the original H2SO4 solution?