# Determination of the Equivalence Point & NaOH Concentration

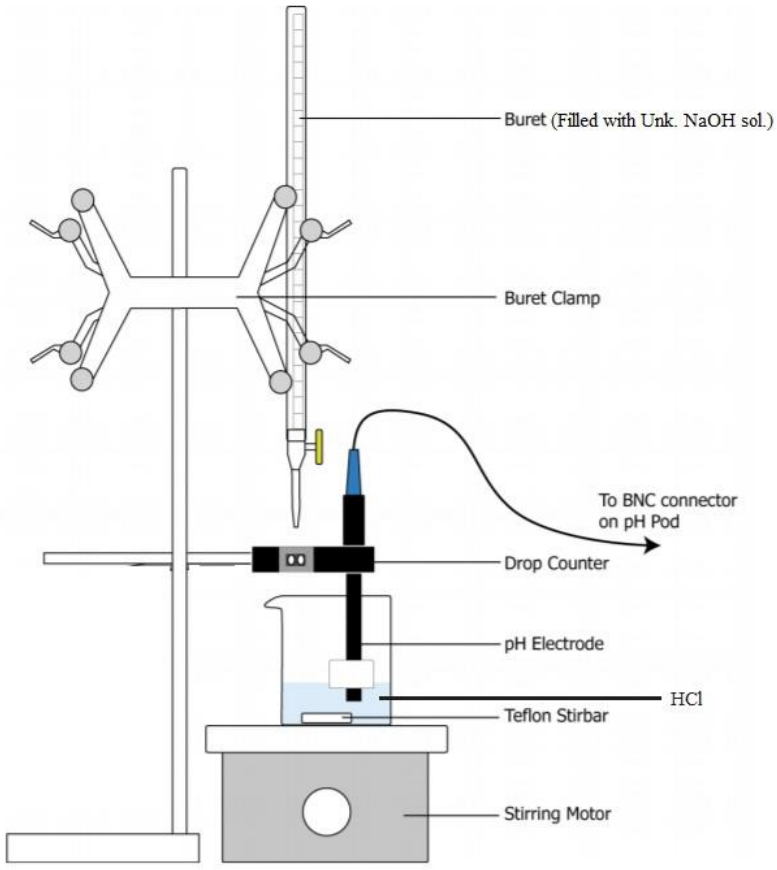
1- Prepare 100ml Of [0.1M] of (HCl) from **Lab stock** with these information [(Density=1.17g/ml) & (Purity=37% w/w)].

2- Take (7.5ml) of solution in [1] in 50ml V.flask and fill with dis.water.

3- Pour [2] in suitable beaker.

4- Fill the burette with (25ml) of given (NaOH) solution.

5- Construct the system as shown in the photo below:




6- Merge the operated pH electrode in the (HCl) beaker and record the pH Value.

7- Drop (1 ml) of (NaOH) from the burette and record the pH Value.

8- Repeat step [7] till you reach the Equivalence Point (1ml each time)..

9- Find the Equivalence Point and calculate the (NaOH) concentration.

# Results:

| No | NaOH Added Volume(ml) | pH Value |
|---|---|---|
| 1 | 0 | $pH_1<7$ |
| 2 | 1 | $pH_2$ |
| 3 | 2 | $pH_3$ |
| 4 | 3 | $pH_4$ |
| 5 | 4 | $pH_5$ |
| 6 | 5 | $pH_6$ |
| 7 | 6 | $pH_7$ |
| 8 | 7 | $pH_8$ |
| 9 | 8 | $pH_9$ |
| … | … | $pH_{…}$ |
| … | … | $pH_{…}$ |
| ..n | n | $pH_n>7$ |

# Titration Graph: