Laboratory instruments

1- The balance of sensitive
2- Pipette
3- Conical flask
4- Burette
5- Volumetric flask
6- Beaker
7- Cylinder
8- Funnel
9- Watch class
10- Filter paper
11- Stand
12- Clamp

* Types of Titration:

1- Acid-base Titration

2- Redox Titrations

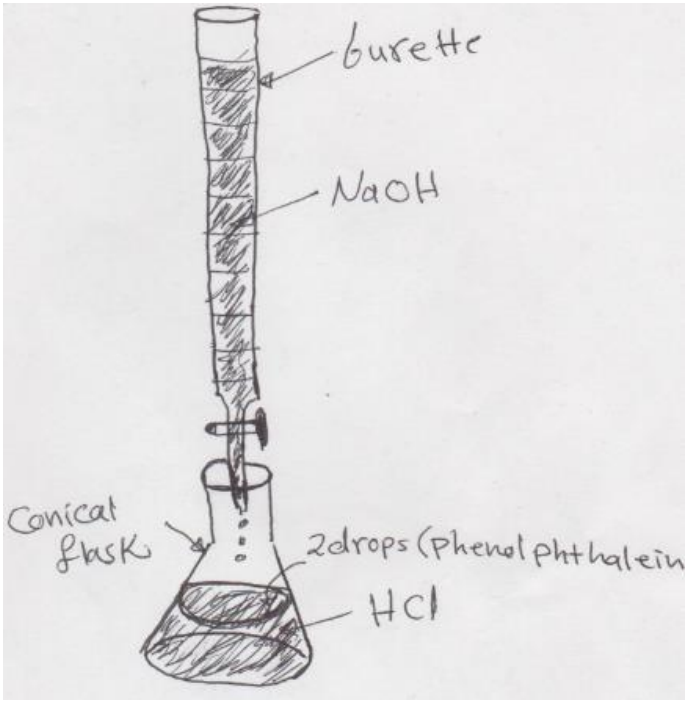
3- Precipitation Titration

4- Complexomentric Titration

*Experiment 1

Name of experiment: Titration 0.1N hydrochloric acid (HCI) with sodium hydroxyide (NaOH)

Purpose of experiment: knew the concentration right for HCI.



$HCI + NaOH \longrightarrow NaCl + H_2O$

In the titration of hydrochloric acid (HCI) with a base such as Sodium hydroxide (NaOH), 1 molecule of HCI will react with 1 molecule of NaOH to produce 1 molecule of the salt, Sodium Chloride (NaCl) and 1 molecule of water. The chemical equation allows us to calculate the concertation of a solution of HCI by titration with the base NaOH (where the concentration of NaOH is accurately known). Recall that at the equivalence point the amount of base add is chemically equally to the amount of acid present in the solution.

$$\mathbf{N_{HCl}\ V_{HCl} = N_{NaOH}\ V_{NaOH}}$$

moles HCl = moles NaOH

***Equivalent point:** is a point in with the added titration is chemically equivalent to the analyte in the sample.

*__**End point:**__ is a point where the indicator changes its colour.