

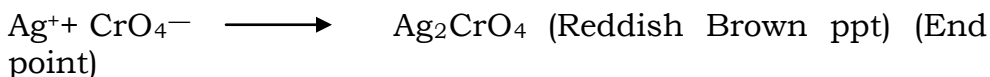
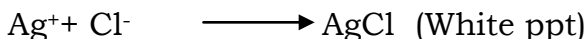
Aim 36

To Determine Chloride Content in the Water Sample

Introduction

Chloride occurs in all natural waste in widely varying conc. The chloride content normally increases as the mineral content increase. The upland and mountain water are low in chlorides. Sea and Ocean water contain very High chloride. The source of chloride are solvent power of water during percolation from top soil and deeper formation and human excretion particularly urine that contain chloride. The other sources are industrial waste which contains chlorides.

The chloride are measured readily by Mohr's method. The sample is titrated silver nitrate using potassium chromate as indicator. The following reaction takes place



The pH should be maintained between 7 & 8.

Requirements

Burette, Pipette, Conical flask etc.

Reagents

- i) Potassium Chromate indicator
- ii) N/35.5 AgNO_3 (Silver Nitrate)

Procedure

1. Take 25 ml sample in conical flask
2. Determine the pH of sample. If pH is not between 7 and 8, adjust it using NaOH / H₂SO₄.
3. Add 2 drops of potassium chromate indicator and titrate it against N/35.5 AgNO₃ till color changes from yellow to reddish brown or brick red.
4. Record the volume (ml) of AgNO₃ used.
5. Take 100 ml distilled water in a conical flask and repeat the above procedure.
6. Note the volume (ml) of AgNO₃ used as blank.

Observation Table

Sample	Volume (ml) sample	Silver nitrate		
		Initial reading	Final reading	Vol (ml) used
Waste water				
Distilled water				

Formula Used

$$\text{Cl}^- (\text{mg/lit}) = \frac{(A-B) \times 1000}{\text{Sample (ml)}}$$

A = AgNO₃ used with sample

B = AgNO₃ used with distilled water