

THE DETERMINATION OF CHLORIDE IN WATER

WHAT YOU WILL NEED



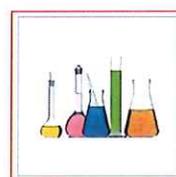
DR359TX IonMeter



3261 Chloride ISE



30301 Chloride ISAB

21301 Chloride
1000ppm Standard

Lab Glassware



Deionised Water

Equipment Required

1. Model DR359TX Ion Meter
2. 3261 Chloride Combination ISE
3. 21301 Chloride 1000ppm Standard Solution
4. 30301 Chloride Ionic Strength Adjustment Buffer
5. Glassware. Beakers 250ml, Volumetric Flask 100ml. 10ml pipette
6. Deionised water.

Standard Preparation

Prepare standards of 100, 10ppm by serial dilution of the 21301 1000 ppm Standard solution. This is best achieved by pipetting 10ml of the standard into a 100ml Volumetric flask and diluting to the mark. This is now a 10ppm Standard solution.

Sample Preparation

If the sample is clean no preparation is necessary. Filtration may be necessary if there is a high solid content. .

Method

To 50ml of each of the standards and samples add 1ml of 30301 ISAB and mix the contents. Be sure the beakers are clean and make sure not to touch the inside of the beakers with bare hands as Chloride contamination from sweat etc. is common.

Beakers that have been washed with softened water or tap water will be contaminated. In these cases rinse the beakers with deionised water.

Immerse the electrode in each of the standards in increasing concentration steps, rinsing the electrodes with distilled water and dabbing off the excess water between standards.

Using the DR359TX Ion meter will allow the result to be read directly on the display. It also allows for up to a 5 point calibration if required.

If you do not have an ION meter you can read the mV values using a pH/mV meter such as an EDT model FE257. Record the mV response and plot a graph of mV vs log of Concentration

Interferences

There are no interference from up to 500 ppm S=, 1000 ppm Br- or I- a 100:1 excess of CN- over Cl-, or from 1000 ppm NH₄⁺