Method Abstract #69
Chlorine by Sodium Thiosulfate Titration

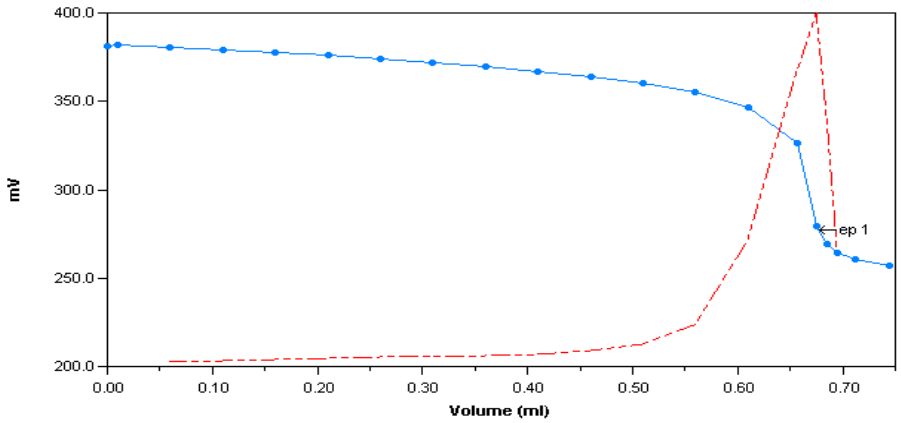
Scope and Application

This method conforms to Standard Method 4500-Cl B, EPA 330.3 and is a variation of ASTM D 1253. It measures the concentration of chlorine in a water sample.

Method Summary

Chlorine concentration is determined by titration with sodium thiosulfate using a redox electrode. Acetate buffer and potassium iodide are added to the sample, leading to the formation of iodine upon reaction with chlorine. The iodine in the sample is then titrated directly with sodium thiosulfate, and is proportional to the concentration of chlorine in the original sample.

Sample Titration Curve



Method Performance

Parameter	Specification
Measuring Range*	0.2 – 20ppm
MDL**	0.2ppm
RSD @ 0.2ppm	3.81% or +/- 0.008ppm
RSD @ 1.0ppm	2.27% or +/- 0.02ppm
RSD @ 2.0ppm	1.09% or +/- 0.02ppm
RSD @ 5.0ppm	0.86% or +/- 0.03ppm

*This measuring range was determined by analyzing laboratory prepared standards formulated from potassium iodide. The measuring range may be increased by using larger capacity analysis vessels and/or auto-dilution.

**The Method Detection Limit (MDL) was determined based on data obtaining a coefficient of variance better than 30%. Results may differ depending on laboratory practices and sample matrix.