

Method Abstract #119

Alkalinity and Chloride by Titration

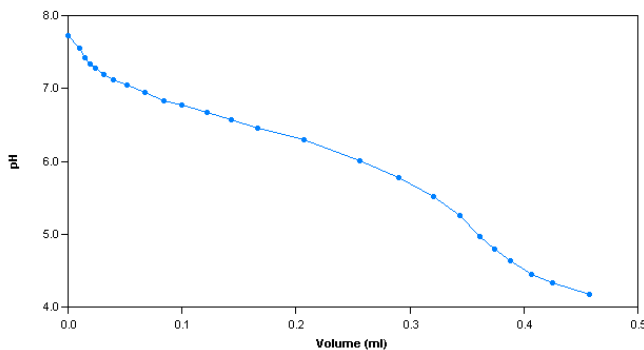
Scope and Application

This method conforms to EPA Method 310.1, Standard Method 2320 and ASTM Method D1067-92 for alkalinity and Standard Method 4500-Cl⁻ D for chloride. It determines the alkalinity and chloride concentrations from a single sample aliquot.

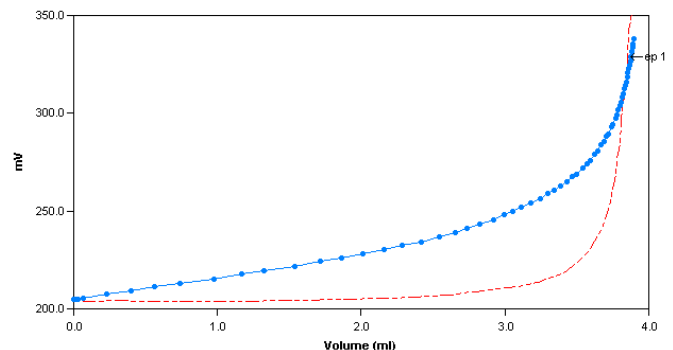
Method Summary

The sample is first titrated with standard sulfuric acid to pH 4.2 and the total alkalinity of the sample is calculated. The same sample aliquot is then titrated with standard silver nitrate until the chloride endpoint is achieved and calculated.

Sample Titration Curves



Alkalinity



Chloride

Method Performance

Parameter	Specification for Alkalinity	Specification for Chloride
Measuring Range*	0.3 – 1000ppm	1.0 – 1000ppm
MDL**	0.3ppm	1.0ppm
RSD @ 10ppm	4.25%	1.95%
RSD of Tap Water	0.38%	0.63%
RSD of Bottled Water	0.28%	0.85%

*This measuring range was determined by analyzing laboratory-prepared standards made from sodium chloride and sodium carbonate.

**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.