Method Abstract #88

Acidity

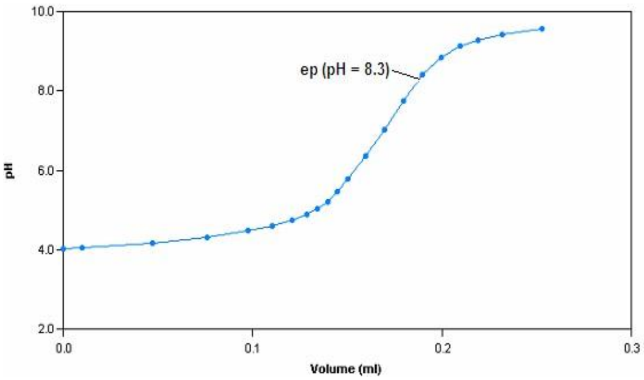
Scope and Application

This method conforms to Standard Method 2310 B and ASTM D 1067. The acidity of a water sample is its quantitative capacity to react with a strong base to a designated pH. The acidity of a solution is based on the total acidic constituent of a solution.

Method Summary

Alkalinity analysis involves the titration of samples with standard 0.02N sulphuric acid (H_2SO_4) titrant to endpoints of pH 8.3 and 4.5. For alkalinities less than 20 mg $CaCO_3$/L, an additional endpoint at pH 4.2 is recorded. 0.02N hydrochloric acid (HCl) titrant may also be used.

Sample Titration Curve



Method Performance

Parameter	Specification
Measuring Range*	0.3 – 2500ppm
MDL**	0.3ppm
RSD @ 0.3ppm	24.58% or +/- 0.07ppm
RSD @ 1ppm	6.49% or +/- 0.06ppm
RSD @ 10ppm	0.96% or +/- 0.10ppm
RSD @ 200ppm	0.48% or +/- 0.96ppm

*Data for this measuring range was obtained using laboratory prepared standards formulated from potassium hydrogen phthalate. 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.

RSD values are better than those specified in Standard Methods.