

## Method Abstract #72

### Alkalinity

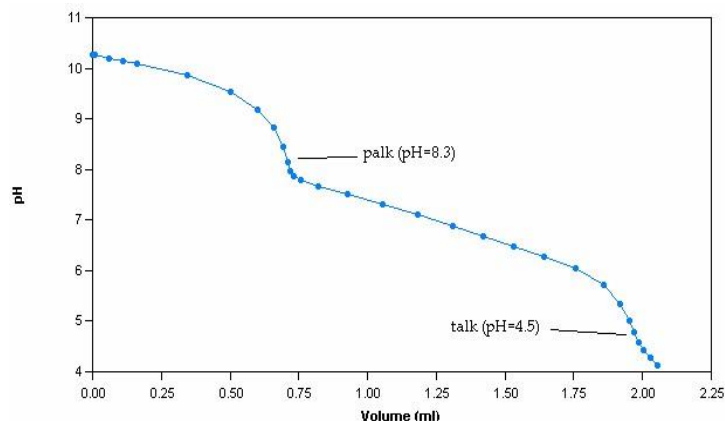
#### Scope and Application

This alkalinity method conforms to Standard Methods 2320 B, ASTM D 1067 and ISO 9963-2. It determines the total and phenolphthalein alkalinity of aqueous samples, along with measuring the concentrations of carbonate, bicarbonate, and hydroxide. Gran alkalinity can also be determined simultaneously.

#### Method Summary

Alkalinity analysis involves the titration of samples with standard 0.02N sulphuric acid (H<sub>2</sub>SO<sub>4</sub>) titrant to endpoints of pH 8.3 and 4.5. For alkalinities less than 20 mg CaCO<sub>3</sub>/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 sodium carbonate. 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.