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## **Method Summary**

### **Determination of Alkalinity in Aqueous Samples**

#### **Scope and Range**

Alkalinity is the acid-neutralizing capacity of a sample and is measured as the sum of all the titratable bases.

This method has accreditation to ISO17025 for ground water, surface water, landfill leachate, treated and untreated industrial and sewage effluents.

Working detection limit for non-saline aqueous samples: 2 mg/l as CaCO<sub>3</sub>

Working detection limit for saline samples: 5 mg/l as CaCO<sub>3</sub>

#### **Principle**

##### **Preparation and Extraction**

The samples receive no pre-treatment before analysis, unless filtered alkalinity is required, in which case the sample is filtered through a 0.45µm filter.

All samples are kept in the fridge maintained at 1-8°C until required for testing.

##### **Analysis**

The sample is titrated with standard acid, to end points of pH8.3 and/or pH 4.5.

The titration to pH 8.3 is known as the Component Alkalinity or the Phenolphthalein Alkalinity and represents the titration of all hydroxide and half the carbonate present in the sample.

The titration to pH 4.5 is the Total Alkalinity and represents all the hydroxide, carbonate and bicarbonate present in the sample.

All results are expressed in mg/l as CaCO<sub>3</sub>

##### **Interferences**

Soaps, oily matter, suspended solids or precipitates may coat the pH electrode and result in a sluggish response.