

# METHOD STATEMENT



## Determinand:

Preparation of sludge samples prior to analysis of the liquid extract for Alkalinity as per method WWC9

## Matrix:

Sample Type: Sludge samples

## Principle of Method:

The alkalinity of a sample is determined by titration with standard 0.02M sulphuric acid to pH 4.5 using either an instrumental or visual pH indicator end point. Sludge samples are either filtered or centrifuged prior to analysis on the liquid.

## Sampling and Sample Preparation:

Samples are normally received in sludge pots.

Sludge samples are stored at 1 - 5 °C.

Sludge samples are usually analysed on an 'as received' basis and are mixed to obtain as near a homogeneous sample as possible.

Samples are stable for 14 days (EPA 310.1M/SM2320B) from sampling.

## Interferences

Substances usually present at their normal concentrations in sludges do not cause interference with the alkalinity determination. Difficulties in end-point detection may be experienced in the presence of organic substances.

## Performance of Method:

### Range of Application:

Normal Reporting Limit: 40mg/l as CaCO<sub>3</sub>

### Limit of Detection:

39.7696mg/l as CaCO<sub>3</sub>

### Recoveries of Compounds:

	<u>Sludge</u>	<u>Spike</u>	<u>AQC</u>
Mg/l CaCO <sub>3</sub>	675.387	1858.523	484.135
RSD mg/l CaCO <sub>3</sub> (%)	2.45	2.15	2.18
% Recovery	-	87.64	96.83

## References:

The Determination of Alkalinity and Acidity in Water. 1981. Methods for the Examination of Waters and Associated Materials. HMSO. ISBN 0117516015.