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Method Summary**Determination of Chloride in sludge by Kone****Scope and Range**

This method is for Yorkshire water and can be used to determine chloride in aqueous samples using an uv/vis spectrophotometer with a range of 2-200 mg/l. The method is applicable to aqueous extracts of sewage sludge samples and related materials. This method is un-accredited.

Limit of Detection for sludge 20 mg/kg with a 10:1 extract.

Calibration Range 2 - 200 mg/l, (20-2000 mg/kg for 10:1 extraction)

References

Relevant national or international standards

Technical publications

Principle

Preparation and Extraction:

Samples must be transported to the laboratory as soon as possible and analysis done within the maximum holding time of 30 days.

10g of sample is weighed, 100ml of deionised water is added and the samples is shaken for one hour at 200rpm. The sample is then filtered using an S & S 1507 paper or equivalent into a small red topped tub. Approximately 2ml of sample is poured into a Kone cup. If the sample is cloudy it is filtered through a 0.45µm syringe filter into the Kone cup.

Analysis:

Samples are then analysed on a Kone analyser. Chloride reacts with mercuric thiocyanate forming a mercuric chloride complex, displacing thiocyanate equivalent to the original chloride concentration. Released thiocyanate reacts with iron (III) forming a red ferric thiocyanate complex, measurement is made spectrophotometrically at 510 nm.

Interferences

Turbid samples will cause errors in readings; samples are re-filtered through a 0.45µm filter to prevent this.

Colour. Samples may have to be diluted to reduce this effect, where this isn't possible, samples should be analysed by ion chromatography as an alternative method.