ALS Environmental Hawarden
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Method Summary

Determination of Fluoride in Soils and Sludge by Ion Selective Electrode

Scope and Range

This method is applicable to sewage sludge, soils and related materials such as sediments and is accredited to ISO17025 for soils and sludge. This method details the determination of fluoride in solution by the use of Ion Selective Electrode.
It has an LOD of 20 mg/kg with a range of 20 – 4,000 mg/kg.

Principle

Preparation and Extraction
Fluoride is reasonably stable, but samples should be collected in plastic containers.

Samples should be stored in fridge until required with a maximum holding time of 28 days.

Sludge is analysed as received. Soils are dried at 35°C and then crushed.

The sample is hot digested with sulphuric acid.

Analysis

The sample is analysed using an Ion Selective Electrode (ISE)

Interferences

High concentrations of Al3+, Fe3+ and La3+ form complexes with fluoride.
High concentrations of hydroxyl ions can also interfere.

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