



Method Summary

Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer

Scope and Range

This method describes the analysis of acid extractable sulphate in solids by acid digestion, followed by measurement using ICP-OES. The instrument calibration is capable of measuring levels up to 25,000mg/kg, with a detection limit of 48mg/kg, based on a 1g sample weight. The method is accredited to ISO17025 and MCERTS on sand, clay, and loam.

Principle

Preparation and Extraction

1g of dried and crushed soil is weighed into a 50ml plastic tube with lid. 50ml of Hydrochloric Acid is added to the sample, the lid is secured and the tube is shaken to dislodge the soil from the bottom of the tube. Samples are placed into a Digiprep at 110°C for 30 minutes, then removed and allowed to cool to approximately 60°C. Samples are then shaken and then centrifuged at 1400rpm for 4 minutes. The extract is then decanted into an 8ml polypropylene tube.

Analysis

Samples are analysed using a Optical Emission Spectrometer with Burgener nebuliser.

Interferences

None known.