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## **Method Summary**

### **Determination of Easily Liberated Sulphide by Ion Selective Electrode**

#### **Scope and Range**

This method for the determination of Easily Liberated Sulphide species, from environmental matrices uses an Ion Selective Electrode technique.

The method is applicable to soils, sludges, sediments and similar solid samples, consisting of principally of sand, clay or loamy type matrices.

Validation has been conducted on sand, clay, loam, and sludge matrices. The method is validated to the MCERTs standard for: clay, loam and sand. Sludge is an unaccredited matrix. The concentration range for the combination silver/sulphide electrode is from 15mg/kg up to 1000 mg/kg of easily liberated sulphide.

The method detection limit is calculated at 15 mg/kg for soils and 16 mg/kg for sludges

#### **Principle**

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

The samples undergo no prior fixing and should be analysed as soon as possible after receipt or kept in cold store until retrieval with a maximum holding time of 28 days.

5g of sub-sampled, as received solid is weighed into a flask and stoppered.

##### **Analysis**

The Sample is reacted with sulphuric acid and heated on a hotplate for 10 minutes. The sulphide evolved is collected in an impinger solution and made up to a set volume. The concentration of sulphide species in this solution is then determined by an Ion Selective Electrode (ISE) procedure.