

Method Number: TM 257

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Method Summary

Determination of Silica in soils by Palintest test kit

Scope and Range

This method details the determination of soluble silica in soil using the Palintest test kit.

Range: 0.6 - 8 mg/ kg

References

none

Principle

Preparation and Extraction

The sample is kept in cold storage until retrieved. A homogenised sample is dried and crushed and weighed. It is extracted in a 2:1 water to soil ratio and shaken for an hour. The sample is then treated to remove colour and filtered.

Analysis

10 cm³ of sample solution is then tested by Palintest kit. Ammonium molybdate reacts with silica under acid conditions to produce molybdosilicic acid. In the presence of a reducing agent, this compound is reduced to form an intense blue complex, which is proportional to the concentration of silica present. The intensity of the blue colour is measured using the photometer at 640 nm by % transmittance.

Interferences

Phosphate - eliminated by using PR tablet

Colour - removed by chemical treatment