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METHOD STATEMENT FOR THE DETERMINATION OF THIOCYANATE

INTRODUCTION

The performance of this method is validated in accordance with internationally recognised procedures.

This method is only performed at Concept Braintree.

This procedure describes the determination of thiocyanate in soils and waters by a colorimetric measurement using ferric nitrate at an acidic pH.

PRINCIPLE

A filtered soil extract or water sample is used for the determination. At an acidic pH (<2), ferric ion (Fe^{3+}) and thiocyanate (SCN) form an intense red colour which is read colorimetrically at 460 nm.

PERFORMANCE CHARACTERISTICS

SUBSTANCES DETERMINED

Thiocyanate (SCN) in soils and waters.

RANGE OF APPLICATION

- Soil samples 10 to 100 mg / kg
- Aqueous samples 1 to 50 mg / l

LIMIT OF DETECTION

- Soil samples 10 mg / kg
- Aqueous samples 1 mg / l

ANALYTICAL QUALITY CONTROL

Analytical quality control is maintained by a number of measures:

- Multi-point calibration with authentic standards (with defined minimum performance characteristics)
- Analysis of control samples within each analytical batch, such as independent standards, matrix spikes or reference materials
- Analysis of reagent/method blanks within each analytical batch
- Ongoing quality assured by the use of control charts in conjunction with warning and action limits for the QC sample data
- Participation in external proficiency testing and interlaboratory schemes such as LGC CONTEST and AQUACHECK



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REFERENCES

- Methods for the Examination of Waters and Associated Materials (MEWAM); publication 100, - Determination of Sulphite, Sulphur Dioxide, Thiosulphate and Thiocyanate, with notes on the determination of Total Sulphur and other Sulphur compounds? 1985.