



CONCEPT LIFE SCIENCES

METHOD STATEMENT FOR THE DETERMINATION OF BIOLOGICAL OXYGEN DEMAND

INTRODUCTION

This method is not UKAS accredited

This procedure describes the determination of biological oxygen demand (BOD) in waters by incubation and determination of dissolved oxygen by means of a dissolved oxygen meter.

PRINCIPLE

BOD (5 day) is determined by dilution of an aliquot of air-saturated sample and, if appropriate, "seeding" with a suitable source of micro-organisms. The container is then incubated for five days at 20 degrees Centigrade in the dark. The amount of oxygen absorbed is determined by means of a dissolved oxygen meter.

PERFORMANCE CHARACTERISTICS

SUBSTANCES DETERMINED

Uptake of dissolved oxygen by the sample during 5 days at 20 degrees centigrade in the dark.

RANGE OF APPLICATION

- Aqueous samples up to 6.0 mg / l without dilution.

LIMIT OF DETECTION

- Aqueous samples 0.1 mg / l

ANALYTICAL QUALITY CONTROL

Analytical quality control is maintained by a number of measures:

- Analysis of control samples within each analytical batch, such as independent standards, matrix spikes or reference materials.
- Participation in external proficiency testing and interlaboratory schemes such as AQUACHECK

REFERENCES

5 Day Biochemical Oxygen Demand (BOD₅) in Waters, DOE Methods for the Examination of Waters and Associated Materials, published by HMSO. 1988, (with Amendments to Dissolved Oxygen in Waters). (ISBN 0117522120).