



Method Summary

Determination of Chemical Oxygen Demand

Principle

This method determines the chemical oxygen demand in water samples using sulphuric acid and potassium dichromate in the presence of a silver sulphate catalyst to oxidize the samples. The method as described oxidizes almost all types of organic compounds and inorganic reducing agents.

Scope and Range

The method is accredited to ISO17025 for ground water, surface water, landfill leachate, treated and untreated industrial and sewage effluents. This method is also accredited to MCERTS for untreated sewage, treated sewage effluent and trade effluent, including settled samples.

Detection limit: 7 mg/l

Preparation and Extraction

Filtered COD; the samples are filtered through a GF/C filter before analysis.

Settled COD; the samples are settled for one hour and the top liquid portion removed for analysis.

Total COD; the samples are well shaken before analysis.

Analysis

2ml of sample is added to the reagent tube and mixed. The tube is put into a heating block at 148°C for 2 hours. After allowing cooling, the result is read using a photometer.

Interferences

Chloride levels over 1000mg/l cause positive interference, so all samples are screened for chloride and samples containing high levels are diluted before analysis.

Suspended solids and insufficiently settled sediment will cause positive interference, so samples of this nature should be diluted before analysis if necessary.