



Method Summary

Measurement of Dissolved Oxygen using a YSI Dissolved Oxygen Meter

Scope and Range

This method determines the level of dissolved oxygen present in aqueous samples, under the conditions of the test, which is 20°C.

It uses a dissolved oxygen electrode and meter.

Detection limit: 1 mg/l

Range: at 20°C the range is from 0 - 9.1mg/l O₂. It is possible to achieve higher reading on the samples, which are super saturated with oxygen.

References

Dissolved Oxygen in Natural and Waste Waters HMSO 1979 ISBN 011 751442.

Standard Methods for the examination of waters and wastewaters 20th Edition, ALPHA, Washington DC, USA.

ISBN 0-87553-235-7.

BS 6068: Section 2.3: 1984 ISO 5813-1983 Determination of dissolved oxygen iodometric method.

Principle

Preparation and Extraction:

The dissolved oxygen should be measured at the point of sampling as dissolved oxygen levels are not stable and results will vary with changes in temperature and if there is any air trapped in the sampling bottle.

If this is not possible the sample should be preserved and analysed using TM 187 dissolved Oxygen by Winkler Titration.

If un-preserved samples are sent to the lab, they must be brought up to a temperature of 20°C in an incubator or water bath and analysed at the earliest opportunity.

Analysis:

The dissolved oxygen meter is calibrated, the probe is placed into the sample and the result read directly from the meter.

Interferences

Any material which attacks, dissolves, or obstructs the membrane, including the accumulation of debris.

Oil and soaps can affect the dissolved oxygen probe membrane and prevent readings from being possible.

Other possible interferences could come from nascent gases such as chlorine, or mineral acids such as hydrochloric acid.