

METHOD STATEMENT

Determinand:

Determination of Total Dissolved Solids.

Matrix:

Sample Type: Raw, Potable, Surface and Ground waters.

Principle of Method:

This method uses any suitable heated water bath and suitable ceramic / metal crucibles. This method determines the level of dissolved material in a sample. Suspended matter, if present, is removed by filtration through a 0.45µm cellulose acetate membrane. The sample is then evaporated to dryness in an evaporating basin on a water bath followed by heating in an oven at the required temperature. The total dissolved solids are then determined gravimetrically.

Interferences:

Interference effects may be caused by samples containing bicarbonates and / or hygroscopic salts that may pick up water after drying.

Performance of Method:

Range of Application:

No upper range of application
The reporting limit is 20.5 mg/l.

Limit of Detection:

20.5 mg/l for 100ml of sample.
If a smaller volume is used the LOD should be adjusted accordingly using following formulae.:
Nominal Volume (ml) x LOD / Actual Volume (ml)

Recoveries of Compounds and Uncertainty of measurement:

Sample type	Mean sample result (mg/l)	Mean sample spike result (mg/l)	Conc. of spike (mg/l)	Spike recovery (%)	Bias (%)	% Uncertainty
Soft water	125	1522	1391	100.5	-	7.97
Medium water	393	1560	1141	102.2	-	8.40
Hard water	373	1493	1116	100.3	-	6.96
Surface water	265	1483	1221	99.7	-	6.61
400 mg/l Std	395.3	-	-	-	-1.17	13.2
1500 mg/l Std	1495	-	-	-	0.29	5.2

References:

Suspended, Settleable and Total Dissolved Solids in Waters and Effluents 1980, Methods for the examination of Waters and Associated Materials. (HMSO) ISBN 011751957X

