

# METHOD STATEMENT



**Determinand:**

Total Solids and Total Dissolved Solids

**Matrix:**

Raw, Potable, Leachates, Effluents and Wastewaters.

**Principle of Method:**

The total solids and total dissolved solids are measured gravimetrically.

The total solids are evaporated to dryness on a steam bath or in an oven at 105°C.

Total dissolved solids are filtered through a 0.45µm membrane filter under reduced pressure. The filtrate is then evaporated to dryness on a steam bath or in an oven at 180°C.

**Sampling and Sample Preparation**

Samples are stable for 6 days (In-House Data) from sampling.

**Interferences:**

Samples containing bicarbonates and/or hygroscopic salts.

The method is not applicable to sea water containing high levels of magnesium and chloride.

The presence of substances which are volatile at temperatures below 105°C or which decompose at temperatures below 105°C to form volatile compounds will give falsely low results for the total solids determination.

**Performance of Method:**

Determinand	Total Dissolved Solids	Total Solids
Range of Application:	12mg/l and upwards	2mg/l and upwards
Limit of Detection:	11.29mg/l	N/A
Normal Reporting Level:	12mg/l	2mg/l

Determinand	High standard		Medium standard		Low standard	
	RSD %	Bias %	RSD %	Bias %	RSD %	Bias %
TDS	12.1	1.00	4.96	-3.0	1.68	-5.3

Determinand	%	Final Effluent		Trade Effluent		Crude sewage	
		20%	80%	20%	80%	20%	80%
TDS	Rec.	96.8	94.3	94.3	91.9	94.5	94.1
	RSD	3.34	1.23	1.61	1.77	3.72	2.94

Determinand	%	Ground Water		Landfill Leachate		Soil Leachate	
		20%	80%	20%	80%	20%	80%
TDS	Rec.	93.2	94.4	103	94.8	105	98.2
	RSD	3.41	2.01	8.30	1.67	9.36	5.23

There is no performance testing for Total Solids

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## Uncertainty of Measurement:

The reported uncertainty is an expanded uncertainty calculated using a coverage factor of 2, which gives a level of confidence of approximately 95%.

Determinand	Uncertainty of Measurement %
Total Dissolved Solids	13.69

## References:

Suspended, Settleable and Total Dissolved Solids in Waters and Effluents 1980, HMSO Methods for the Examination of Waters and Associated Materials. ISBN 011 751957X.

The Conditionability, Filterability, Settleability and Solids Content of Sludges 1984. (A compendium of Methods and Tests) HMSO. ISBN: 011 7517879. Methods for the Examination of Waters and Associated Materials.