



METHOD STATEMENT

Determinand:

Salinity (not UKAS accredited)

Matrix:

Saline water, estuarine water, leachates, industrial effluents and waste waters

Principle of Method:

Salinity is defined as the total solids in water, after all carbonates have been converted to oxides, bromide and iodide have been replaced by chloride and all organic matter has been oxidised.

The salinity level is determined by a mercuric nitrate titration method using a salinity test kit.

The pH is lowered to 3 by addition of nitric acid. Mercuric ions react with chloride ions to form mercuric chloride. Excess mercuric ions complex with diphenylcarbazone to form a purple solution. The colour change from yellow to violet indicates the endpoint.

**Sampling and Sample Preparation:**

Samples can be stored at room temperature prior to analysis. There is no preservative required for salinity.

Interferences:

None listed.

Performance of Method:

Range of Application:	1600 to 40000 mg/l (ppm) 1.6 to 40 g/kg (ppt)
Normal Reporting Level:	1600 mg/l 1.6 g/kg

Uncertainty of Measurement:

The Uncertainty of measurement has been calculated using the following calculation: -

$$\text{UOM} = \text{Bias} + (2 \times \text{SD})$$

Determinand	Uncertainty of Measurement %
Salinity	12.2

References:

Hanna HI 3835 Salinity Test Kit Instruction Manual (which references Standard Methods for the Examination of Water and Wastewater, 16th Edition, 1985)