

METHOD STATEMENT

Determinand:

Colour

Matrix:

Treated sewage, surface waters, ground waters, recreational waters and process waters

Principle of Method:

Colour is expressed in the terms mg/l Pt/Co scale. This is defined as the colour produced by 1mg/l platinum in the form of chloroplatinic acid in the presence of 1mg/l cobaltous chloride hexahydrate.

The intensity of the colour is determined by filtering samples through cellulose acetate membranes of 0.45 micron pore size and the absorbance of the filtrates measured spectrophotometrically in 40mm cells at 400nm wavelength.

Sampling and Sample Preparation:

Samples should be stored at room temperature. If samples have been refrigerated, analysis must not be started until a stable room temperature is attained.

Samples are stable for 13 days (In-House Data) from sampling.

Interferences:

Finely divided suspended matter interferes in the measurement and must be removed by filtration prior to analysis.

Performance of Method:

Determinand	Range of Application (Pt/Co scale)	LOD (Pt/Co scale)	Minimum Reporting Limit (Pt/Co scale)	Low Standard		High Standard	
				% RSD	% Bias	% RSD	% Bias
Colour	1.1 - 50mg/l	1.0666	1.1	4.16	-4.86	1.58	-1.92

Determinand	Nuneaton treated sewage		Surface Water		Eddlestow Groundwater	
	% RSD	% Bias	% RSD	% Bias	% RSD	% Bias
Colour	2.69	-3.27	1.81	-7.89	2.98	-0.25
	Recreational water		Clean Process water		Dirty process water	
	% RSD	% Bias	% RSD	% Bias	% RSD	% Bias
Colour 80% of Range	1.49	-2.12	1.61	-2.15	1.77	-4.20

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 (%)
Colour	20.12

References:

Colour and turbidity of waters 1981. Method for the examination of waters and associated materials. HMSO. ISBN: 0117519553, Method A3.

