METHOD STATEMENT

Determinand:
Bisphenol A

Matrix:
Surface Water, Groundwater and Saline Water

Principle of Method:
The method is a direct aqueous injection (DAI) procedure. Samples are analysed by high performance liquid chromatography using a triple quadrupole mass spectrometer detector. Samples are injected on to a HPLC analytical column and analytes are separated from matrix interference. Analytes are identified and quantified with mass spectrometric detection in SRM mode. Quantitation is by an internal standard procedure.

Sampling and Sample Preparation:
Samples should be taken in an STL90 amber glass vial. No preservative is required. Samples are stored at 3 ± 2 °C prior to analysis.

Samples are stable for 14 days (In-House Data) from sampling.

Interferences:
HPLC-TQ is an extremely selective technique and interferences should only be encountered very rarely. Any interfering compounds would have to display the identical SRM transition at the same retention time; this is extremely unlikely in potable water samples. However, any compound, which passes through the extraction procedure, and has a similar liquid chromatographic retention time and mass spectrometric properties to the compound of interest, will cause interference. Samples containing high humic or fulvic loading have been demonstrated to not cause significant ion suppression for the compounds.

Performance of Method:

LOD, Precision and Bias

Determinand	LOD µg/l	LOQ µg/l	MRL µg/l	Low Std		High Std	
				%RSD	%Bias	%RSD	%Bias
Bisphenol A	0.00771	0.01518	0.090	5.39	-5.52	4.43	0.27

Matrix Spike Recoveries

Determinand	Saline Water - Aberdaron		Surface Water – Draycote Reservoir		Ground Water – Brecon Carreg	
	%RSD	%Rec.	%RSD	%Rec.	%RSD	%Rec.
Bisphenol A	4.82	98.9	3.57	100.5	3.30	100.3

Uncertainty of Measurement:

Determinand	Uncertainty of Measurement %
Bisphenol A	14.80

References:
EU Priority Substances Directive 2013, Directive 2013/39/EC