National Laboratory Service

Method Summary for The Extraction and Determination of PFOS_PFOA in Water

Determinand	Perfluorooctar Perfluorooctar	noic acid ne sulphonic acid	PFOA PFOS anion
Matrix:	Freshwater and Saline waters		
Instrumentation:	UHPLC - Triple Quadrupole Mass Spectrometry		
Principle:	Freshwater samples are analysed by liquid chromatography-mass spectrometry (LC-MS/MS) using Direct Aqueous Injection. Saline samples are extracted using solid phase extraction (SPE) prior to analysis and analysed by liquid chromatography-mass spectrometry (LC-MS/MS). An aliquot of sample is injected into a Liquid Chromatogram interfaced to a Triple Quadrupole Mass Spectrometer. This operates in Negative, Atmospheric Pressure Electrospray (ESI) mode. Data is acquired in Multiple Reaction Monitoring (MRM) mode.		
Range of Application:	Freshwater: up to 0.03µg/l Saline water: up to 0.004µg/l for PFOS (anion) and 0.008µg/l for PFOA. The range may be extended by dilution of the sample.		
MRV:	Available upon request		
Container:	125ml polypropylene bottle		
Storage/Preservation:	Cold Storage at $5^{\circ}C \pm 3^{\circ}C$		
Interferences:	Any compound with the same MRM transition and retention time as the ion of interest and any co-eluting compounds which result in signal suppression or enhancement will interfere.		
Within Laboratory Quality Control & Performance Criteria:			
	Precision:- Bias:-	Better than 25% RSD Better than 20% Bias	
External Quality Control:	Aquacheck		