



METHOD STATEMENT

Determinand:

Epichlorohydrin (not UKAS accredited)

Matrix:

Potable water

Principle of Method:

Epichlorohydrin is extracted from aqueous solution by liquid/liquid extraction using dichloromethane on Gerstel MPS Sampler. The compound is quantified by gas chromatography with mass spectrometry detection (GCMS). The mass spectrometer is operated in electron impact mode with specific ion monitoring.

Sampling and Sample Preparation:

Analysis is performed on the samples as received. Samples should be received in McCartney Vials

Samples should be stored at $3\pm 2^{\circ}\text{C}$ and extracted within 10 working days.

Interferences:

Any co-extracted substance with a corresponding GC retention time, and with the same ions as those being monitored, may interfere.

Performance of Method:

Range of Application: 0.1 – 10 $\mu\text{g/l}$

Normal Reporting Level: 0.1 $\mu\text{g/l}$

LOD, Precision and Bias

Compound	LOD ($\mu\text{g/L}$)	Low Standard		High Standard	
		Bias	RSD	Bias	RSD
Epichlorohydrin	0.00988	-0.11%	9.66%	2.56%	4.80%

Spike Recoveries from Matrix Waters

Compound	De-chlorinated tap water	
	Recovery	RSD
Epichlorohydrin	103.56%	4.71%

