

METHOD STATEMENT

Determinand:

Metaldehyde

Matrix:

Sample Type: Waters abstracted for potable supplies

Principle of Method:

250ml of sample is extracted onto a pre-rinsed Strata-X cartridge. The compound is eluted from the cartridge with an ethyl acetate/acetone mixture, followed by iso-octane and addition of working internal standard prior to analysis.

Metaldehyde is determined by capillary gas chromatograph with splitless injection, followed by mass spectrometric detection in selected ion mode (GCMS-SIM).

Interferences:

Any compound which passes through the extraction, and has similar gas chromatographic and mass spectrometric properties to the analyte.

Performance of Method:

Range of Application:

The operational range for metaldehyde is from the limit of detection, to 0.50 µg/l. Samples producing results above this range should be diluted to bring the sample response below that of the top standard. The PCV for this determinand is 0.1µg/l.

Limit of Detection and Recoveries of Compounds

GCMS01 Instrument

<u>Compound</u>	<u>St @ 0.100 µg/l</u>	<u>% Recovery in Medium hardness potable water</u>	<u>LOD/Reporting Limits µg/l</u>
Metaldehyde	0.0088	97.2	0.003

GCMS03 Instrument

<u>Compound</u>	<u>LOD/Reporting Limits µg/l</u>
Metaldehyde	0.005

Uncertainty of measurement

<u>Compound</u>	<u>Uncertainty % at 0.1µg/</u>
Metaldehyde	20.3

References:

SCA Method 226b – “The determination of metaldehyde in waters using chromatography with mass spectrometric detection”.

HP 5973MSD HP 6890 Series GC Quick reference guide Manual Part No. G1701-90033

GC Enviroquant Users Guide – Hewlett Packard. (G1032-90029)

