Method Summary

Determination of Phenols in Waters using Solid Phase Extraction, Derivitisation and GC-MS

Scope and Range

This method describes a procedure for the detection, identification and quantification of 17 phenolic compounds ranging from phenol to dinoseb.

Calibration Range: 2.5 µg/L to 500 µg/L
Sample Range: LOD-50 µg/L

Compound	LOD µg/L
Phenol	0.5
2-Methylphenol	0.5
3-Methylphenol	0.5
4-Methylphenol	0.5
2-Chlorophenol	0.5
2,4-Dimethylphenol	0.5
4-Chloro-3-methylphenol	0.5
2,6-Dichlorophenol	0.5
4-Chlorophenol	0.5
2,4-Dichlorophenol	0.5
2-Nitrophenol	0.5
2,4,6-Trichlorophenol	0.5
2,4,5-Trichlorophenol	0.5
4-Nitrophenol	0.5
2,3,5,6-Tetrachlorophenol	0.5
2,3,4,6-Tetrachlorophenol	0.5
Pentachlorophenol	2

References

none

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Principle

Preparation and Extraction:
A known volume of sample, usually 200ml is acidified and passed through a SPE cartridge. The analytes of interest are eluted from the SPE cartridge and derivitised.

Analysis:
Samples are analysed on an Agilent 6890 Gas Chromatograph with an Agilent 5973 or 5975 Mass Selective Detector.

Interferences

Due to the nature of the analysis interferences should be minimal but any compound that fragments in a similar fashion at a retention time close to that of the target analytes may interfere with the analysis.