Method Summary

Determination of BTEX and GRO in Waters

Scope and Range

This method describes a procedure for determining the concentration of Gasoline Range Organic Hydrocarbons (GRO), in the carbon number range C_5 to C_{12}, including BTEX components namely Benzene, Toluene, Ethybenzene and Xylene isomers (o-, m- and p- isomers), and MTBE (tert butyl methyl ether) & TAME (tert amyl methyl ether). Method applies to waters and leachates.

Analyte	LOD (ug/l)	Upper Limit	Treated Sewage Accreditation	Ground Water Accreditation	Surface Water Accreditation
MTBE	<3	4000	ISO 17025	ISO 17025	ISO 17025
TAME	<4	4000	N/A	N/A	ISO 17025
Benzene	<7	4000	ISO 17025	ISO 17025	ISO 17025
Toluene	<4	4000	ISO 17025	ISO 17025	ISO 17025
Ethylbenzene	<5	4000	ISO 17025	ISO 17025	ISO 17025
m,p-Xylene	<8	4000	ISO 17025	ISO 17025	ISO 17025
o-Xylene	<3	4000	ISO 17025	ISO 17025	ISO 17025
GRO >C5-C12	<50	72,000	ISO 17025	ISO 17025	ISO 17025
GRO >C6-C8	<10	72,000	ISO 17025	ISO 17025	N/A
GRO >C8-C10	<10	72,000	ISO 17025	ISO 17025	N/A
GRO >C10-C12	<10	72,000	ISO 17025	ISO 17025	N/A
A range of unaccredited aliphatic and aromatic bands are also reportable.					

References

none

Principle

Preparation and Extraction:
Sodium Chloride is added to a clean 10ml headspace vial. Sample is added to the vial and surrogate standard is spiked beneath the surface of the water. The cap is then crimped in place.

Analysis:
Analysis is undertaken by gas chromatography with flame ionisation detection (GC-FID), e.g. - Agilent 6850 gas chromatograph with Gerstel or CTC headspace auto sampler and FID detector.

Interferences

Flame ionisation is a non-specific means of detection, therefore any substances either petroleum or non-petroleum in origin, that co-elute with any of the target compounds, will interfere with the determination e.g. solvents.