

Method Number: TM 411

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**Method Summary****Determination of Acid herbicides in Liquids by GCMS****Scope and Range**

This method describes a procedure to determine selected acid herbicide compounds in organic extracts. The compounds selected are DNOC, Clopyralid, MCPA, Mecoprop, Dicamba, MCPB, 2,4-DB, 2,3,6-TBA, Dichlorprop, Triclopyr, Fenoprop, 2,4-D, 2,4,5-T, Bromoxynil, Benazolin, Ioxynil, Pentachlorophenol and Fluroxypyr. The compounds are solvent extracted and derivatised. This method is unaccredited and applicable to ground water and similar environmental matrices.

References

EPA8270D - Semi-volatile organic compounds by Gas Chromatography/Mass Spectrometry

Determination of Chlorinated Acids in drinking water by liquid-liquid microextraction, derivatization, and fast chromatography with electron capture detection, EPA Method 515.4.

Principle

Acid herbicide compounds are acidified with hydrochloric acid and extracted with MTBE, concentrated and derivatised. Separation of the target analytes is performed by capillary gas chromatography and detected by mass selective detection. The concentration is determined by calibration for the total procedure.

Interferences

The reagents sometimes contain impurities of acid herbicide compounds. Analysis of blanks is performed to verify their appropriateness.

Solvents, reagents, glassware and other sample processing hardware may yield artefacts and/or interferences to sample analysis. All these materials must be demonstrated to be free from interferences under the conditions of the analysis. This is undertaken by analysis of method blanks. Interferences co-extracted from the sample will vary considerably from source to source.