



SPE Application Note for Triazine Herbicides from Aqueous Samples

This method was developed for the extraction of triazine herbicides and their metabolites from water samples using a non-polar retention mechanism.

EXTRACTION PROCEDURE

ISOLUTE® SPE Column: ISOLUTE Triazine 1 g/6 mL (Part # 222-0100-C)

Pre-treatment: None.

Solvation: Solvate the column with 10 mL of methanol at 10 mL/min

Equilibration: Solvate the column with 10 mL of deionized water at 10 mL/min

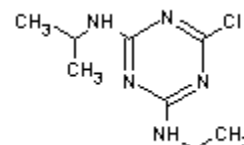
Sample application: Apply 500 mL of sample at a flow rate of 15 mL/min

Interference elution: Rinse column with 10 mL of deionized water at 10 mL/min Dry the column for 30 mins by vacuum aspiration.

Analyte elution: To elute analytes, apply the first volume of acetone (4 mL) to the extraction column. Soak for two minutes. Add the second volume of acetone (4 mL) to the extraction column and collect.

For further concentration prior to analysis, evaporate the solvent at 35 C to a volume of 500 ul.

Structure Various. Atrazine is given as an example.



Structural considerations The analytes contain a basic triazine ring structure with various substituent groups. The basic nature of the analytes can be exploited using secondary silanol interactions with the sorbent to improve retention, particularly for the polar metabolites, which have less hydrophobic character.

Matrix considerations The analytes are extracted from a polar aqueous matrix.

Analytical method HPLC or GC

Reagents

General comments ISOLUTE Triazine SPE columns have been QC tested to ensure good retention and recovery of the polar atrazine metabolites.

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ISOLUTE column part numbers represent the product configuration of choice for use with a vacuum sample processing station. For 96-well and alternative column configurations compatible with any SPE automation system, please contact Biotage.

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