

Application Note

EXTRACTION OF ORGANOCHLORINE PESTICIDES, HERBICIDES, AND ORGANOHALIDES FROM DRINKING WATER EPA METHOD 508.1

Field	Environmental
Sample	EPA Method 508.1 Analytes
Matrix	Drinking water and ground water
Extraction Disk	BAKERBOND Speedisk™ C18 High Capacity Extraction Disk, Product Number 8055-07
Safety and Protective Equipment	Goggles and face shield, lab coat and apron, proper gloves, vent hood, Type B fire extinguisher. Read and follow all safety instructions on applicable Material Safety Data Sheets.
Sample Preparation	To a 1 L sample, methanol (2–5 mL) may be added to obtain a more homogeneous sample. Mix well.
Extraction Disk Conditioning	Assemble a Speedisk™ extraction station. (Other types of vacuum stations can also be used.) Mount disk on vacuum port. Wash the disk with 15 mL of 1:1 ethyl acetate:methylene chloride. Let soak 1 minute and apply a low vacuum. Add 15 mL of methanol to the disk. Pull through only a small amount of methanol and stop the vacuum. Let the disk soak for 1 minute. Pull through most of the remaining methanol, leaving 3–5 mm of methanol above the surface of the disk. From this point to the end of the sample addition, do not allow the disk to run dry. Repeat using 15 mL of organic-free water.
Sample Addition	NOTE: The larger solvent volumes (15 mL vs. 5 mL) are used in this application note due to the recommended disk, C18 High Capacity, being a larger disk. This is as recommended in the EPA 508.1 method.
Sample Elution	Remove the BAKERBOND Speedisk™ from the extraction station and insert a suitable collection vial. Add 15 mL of ethyl acetate to the sample bottle to rinse. Transfer the ethyl acetate to the disk. Let this soak for 1 minute and then pull through to the collection vial. Repeat this with 15 mL methylene chloride. Next add 3 mL 1:1 ethyl acetate:methylene chloride to the disk rinsing it down the sides. Let this soak for 1 minute and pull through. Repeat.
Drying And Concentrating The Eluate	Dry the combined extracts that are in the collection vial by passing them through a drying tube containing 10 g of anhydrous sodium sulfate. (Additional anhydrous sodium sulfate may be used if the extract is still cloudy.) Rinse the collection tube and the sodium sulfate with two 3 mL portions of 1:1 ethyl acetate:methylene chloride. Combine the extract and washings and concentrate to between 0.5 to 1 mL under nitrogen gas. Reconstitute to 1 mL with ethyl acetate. NOTE: Do not concentrate below 0.5 mL.
Final Analytical Method	GC-ECD (Refer to EPA Method 508.

Product List

Product Number	Description
8055-07	BAKERBOND Speedisk™ C18 High Capacity
9264	Methylene Chloride, ULTRA RESI-ANALYZED™
9254	Acetone, ULTRA RESI-ANALYZED™
9263	Methanol, ULTRA RESI-ANALYZED™
4219	Water, ULTRA RESI-ANALYZED™
3375	Sodium Sulfate, Anhydrous, Granular, ULTRA RESI-ANALYZED™ Reagent



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