



Endocrine Disruptors in Soil

Waters Corporation



This is an Application Brief and does not contain a detailed Experimental section.

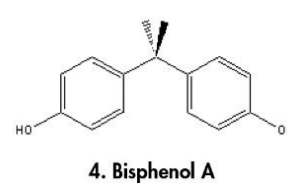
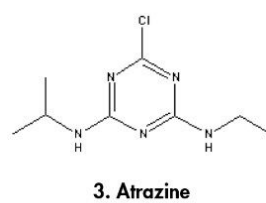
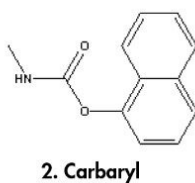
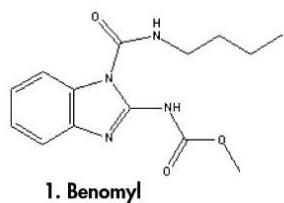
Abstract

This application brief demonstrates analysis of endocrine disruptors in soil.

Introduction

The compounds used in this study are –

1. Benomyl
2. Carbaryl
3. Atrazine
4. Bisphenol A



Experimental

HPLC Method

Column:	Symmetry C ₁₈ , 3.9 x 150 mm, 5 µm
Part number:	WAT046970
Mobile phase A:	10 mM phosphate pH 6.8
Mobile phase B:	Methanol
Flow rate:	1.0 mL/min
Injection volume:	100 µL

Sample: 10 g potting soil extracted with 25 mL acetonitrile; then SPE on Oasis HLB

Detection: PDA (225 nm extracted, 0.04 AUFS)

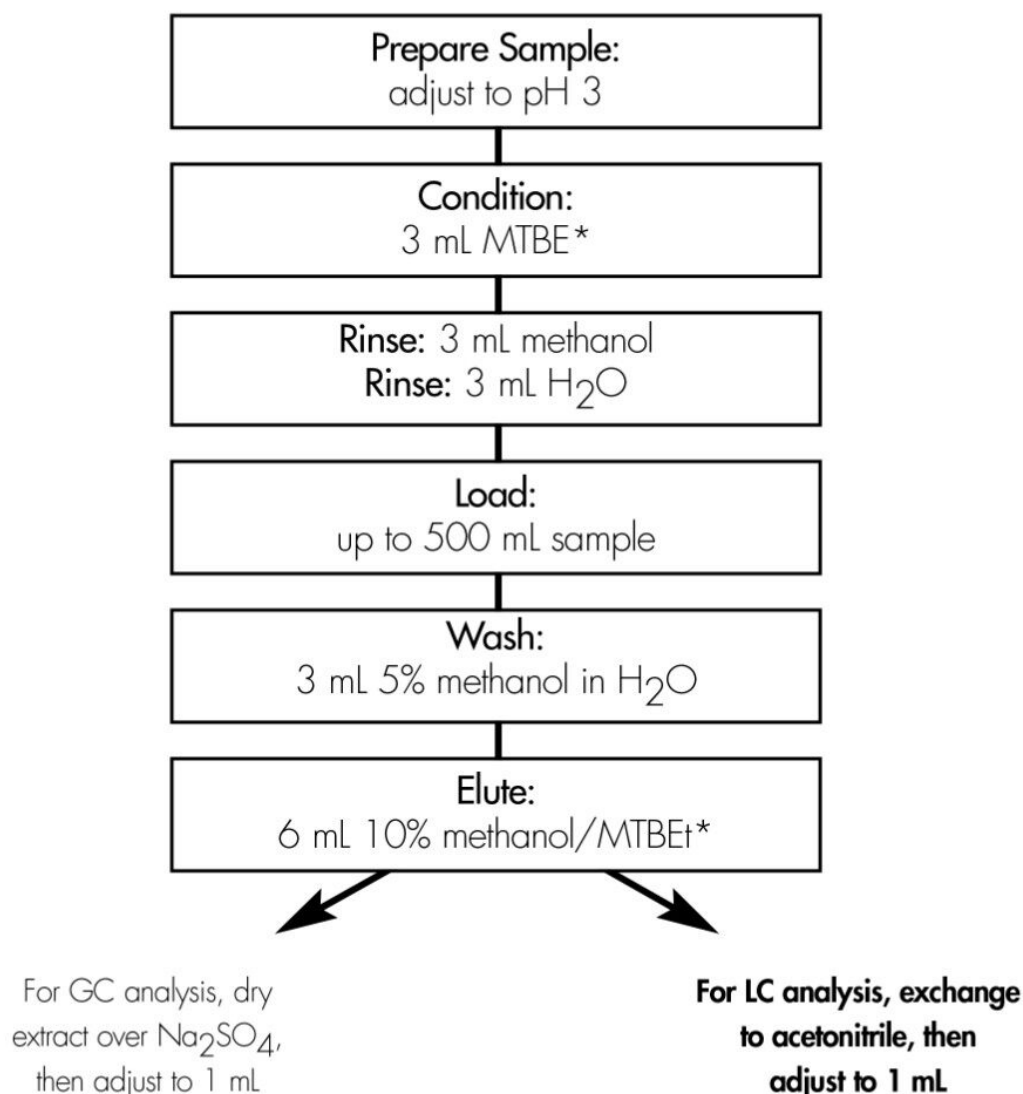
Gradient

Time (min)	Profile	
	%A	%B
0	60	40
20	0	100

Soil samples (5 g) were spiked with the appropriate compounds and extracted with 25 mL of acetonitrile (30 minutes on shaker). A 5 mL aliquot of the acetonitrile extract was diluted to 100 mL with reagent water (MilliQ) and then processed by SPE.

Oasis® SPE Method for Endocrine Disruptors

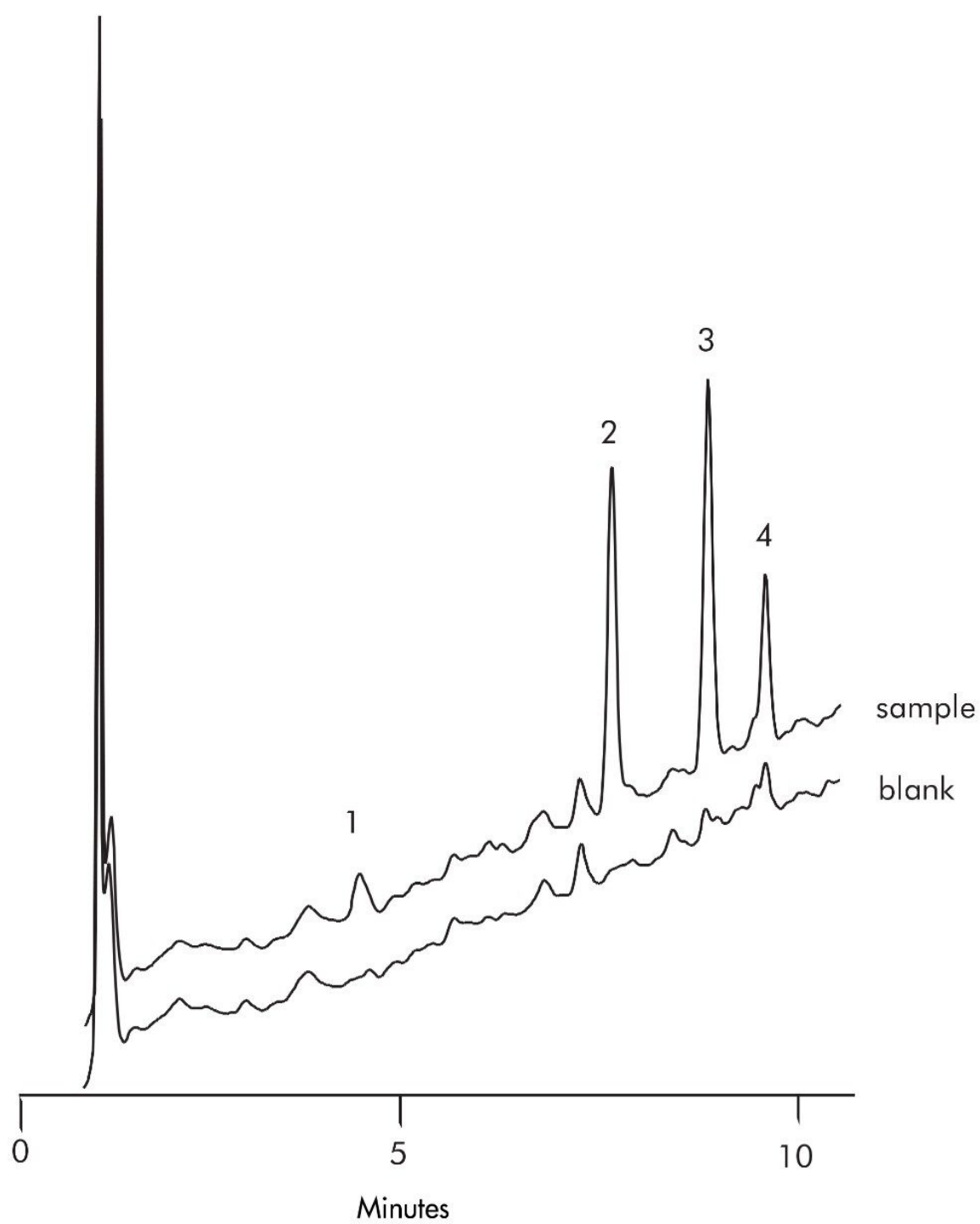
Conditions for Oasis® HLB Cartridge, 6 cc, 200 mg
Part Number WAT106202



* methyl tbutyl ether
diethyl ether can be used as an alternative to MTBE

Results and Discussion

50 ppb spike level	
Compounds	% Recovery $\pm$ % RSD
1. benomyl	65 $\pm$ 6
2. carbaryl	91 $\pm$ 4
3. atrazine	84 $\pm$ 5
4. bisphenol A	78 $\pm$ 6



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