Waters™

Nota applicativa

Atrazine and Metabolites in Drinking Water

Waters Corporation

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

Abstract

This application brief details on the analysis of atrazine and its metabolites using Symmetry Columns.

Introduction

The compounds analyzed in this study are:

1. Hydroxydesisopropylatrazine
2. Desethyldesisopropylatrazine
3. Hydroxydesethylatrazine
4. Desisopropylatrazine
5. Hydroxyatrazine
6. Desethylatrazine

7. Atrazine

Experimental

HPLC Method

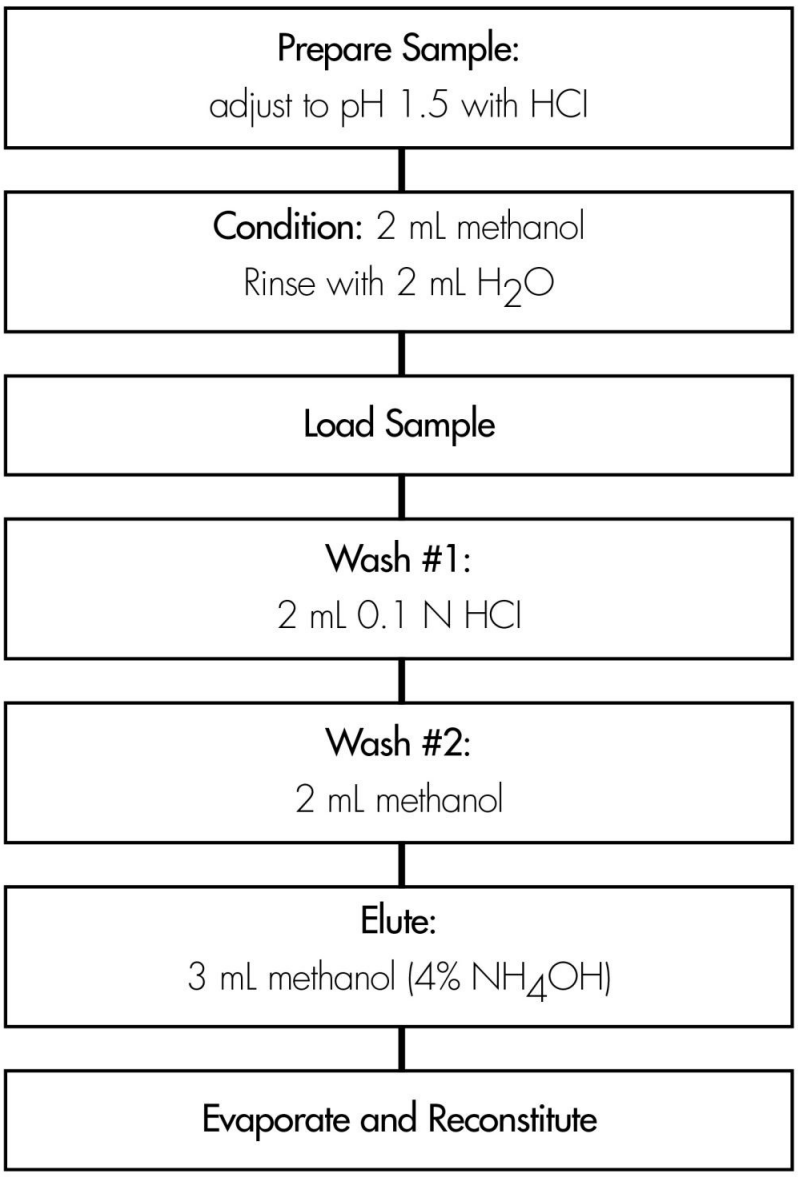
Column:	Symmetry Shield RP_{18}, 3.9 x 150 mm, 5 µm
Part number:	186000108
Mobile phase A:	20 mM Phosphate buffer, pH 6.8
Mobile phase B:	Acetonitrile
Flow rate:	0.8 mL/min
Injection volume:	80 µL
Detection:	PDA (215 nm)

Gradient

Time (min)	Profile	
	%A	%B
0	95	5
2	95	5
20	30	75

Oasis® MCX SPE Method

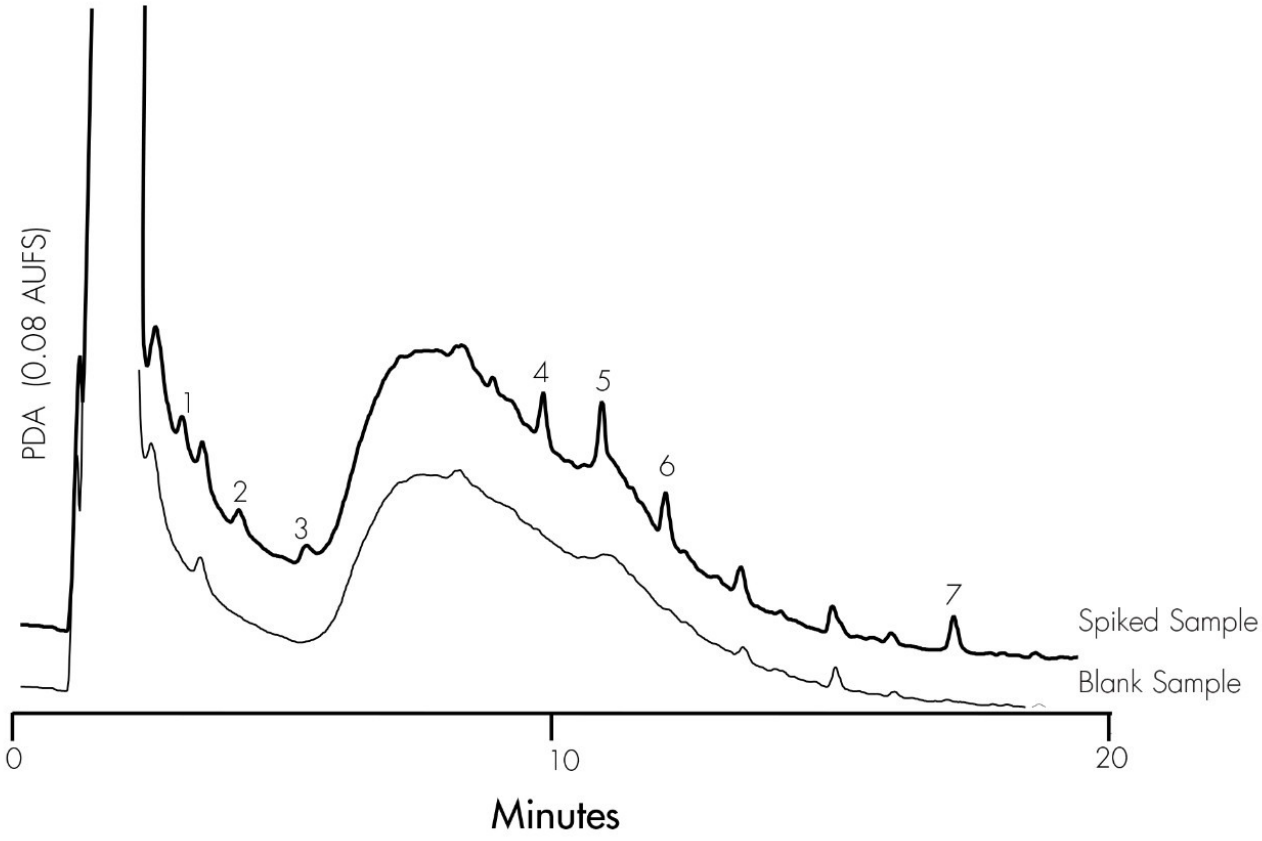
Conditions for Oasis® MCX Cartridge, 6 cc, 150 mg
Part Number 186000256



Results and Discussion

Drinking water samples (100 mL) were spiked with the herbicides and adjusted to pH 1.5. The samples were then analyzed using 6 cc Oasis MCX cartridges using the protocol for basic compounds.

Compounds	(% Recovery – % RSD, n=5)	
	0.2 µg/L	1.0 µg/L
1. Hydroxydesisopropylatrazine	94 (3)	85 (3)
2. Desethyldesisopropylatrazine	75 (8)	76 (5)
3. Hydroxydesethylatrazine	89 (6)	76 (7)
4. Desisopropylatrazine	79 (4)	83 (2)
5. Hydroxyatrazine	107 (7)	101 (2)
6. Desethylatrazine	79 (5)	83 (3)
7. Atrazine	89 (5)	77 (3)



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