

Triazine Herbicides in Drinking Water

Waters Corporation



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

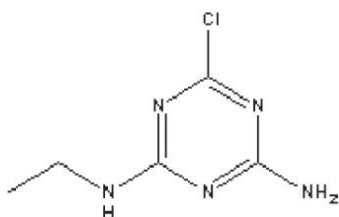
Abstract

This application brief demonstrates analysis of triazine herbicides in drinking water.

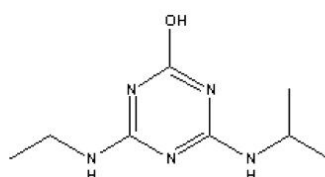
Introduction

The compounds used in this study are –

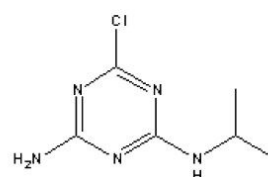
1. Desisopropylatrazine
2. Hydroxyatrazine
3. Desethylatrazine
4. Simazine
5. Cyanazine
6. Atrazine



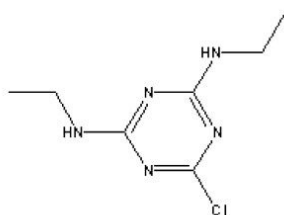
1. Desisopropylatrazine



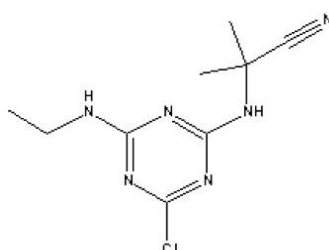
2. Hydroxyatrazine



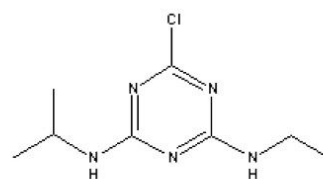
3. Desethylatrazine



4. Simazine



5. Cyanazine



6. Atrazine

Experimental

HPLC Method

Column: Symmetry Shield RP₈, 3.9 x 150 mm, 5 µm

Part numbers: WAT200655

Mobile phase A: 5 mM phosphate buffer, pH 6.7/Acetonitrile
85:15

Mobile phase B: Acetonitrile

Flow rate: 1.0 mL/min

Injection volume: 75 µL

Detection: UV @ 214 nm (0.02 AUFS)

Gradient

Time (min)	Profile	
	%A	%B
0	100	0
2	100	0
25	30	70

Oasis® HLB Extraction Method

Conditions for Oasis® HLB Cartridge, 3 cc, 60 mg
Part Number WAT094226

Condition: 3 mL methanol
Rinse: 3 mL H₂O

Load:
75 mL sample @ 4 mL/min

Wash:
1 mL H₂O

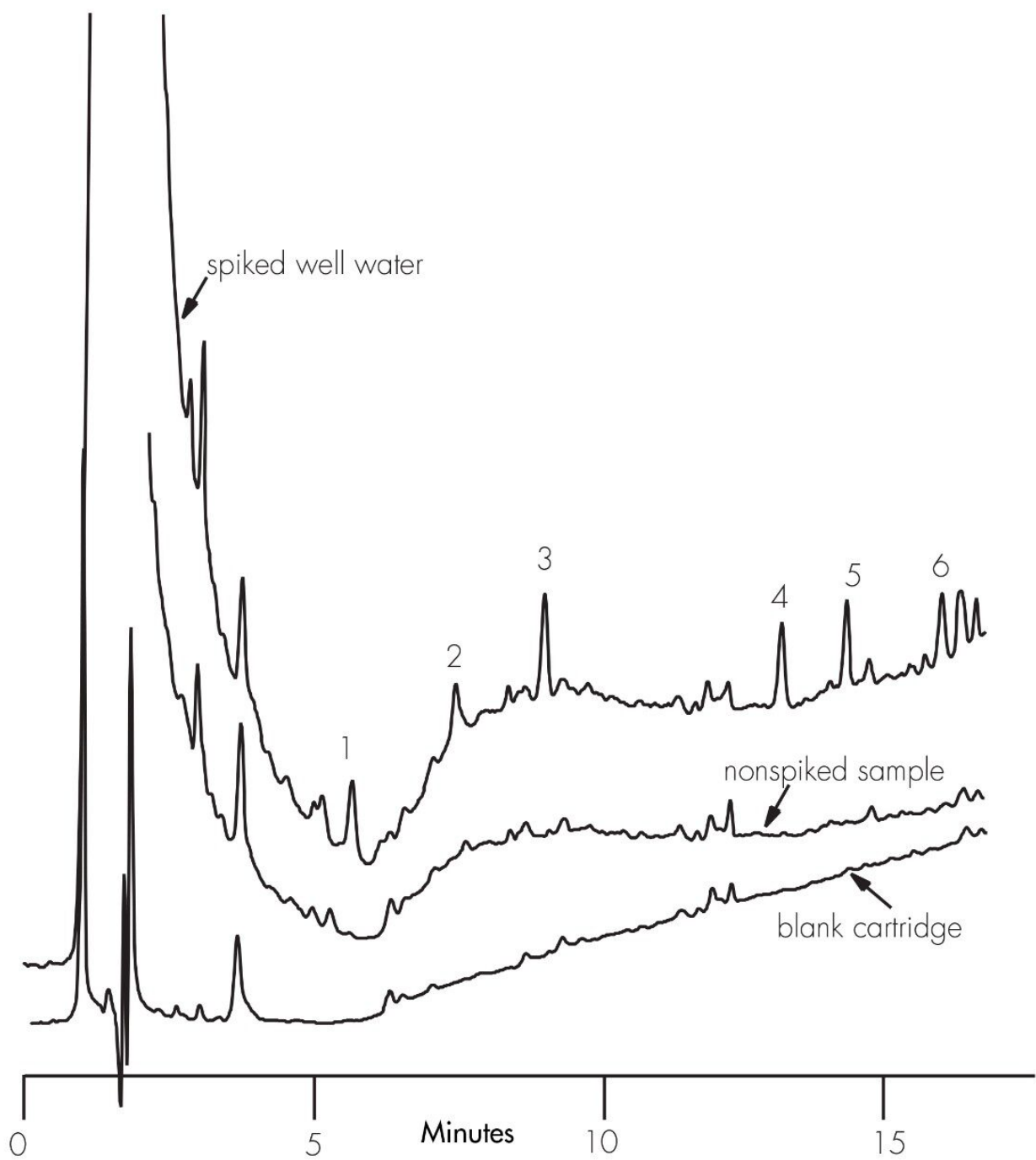
Elute:
1.2 mL methanol

Evaporate to 0.2 mL

Reconstitute to exactly 1.0 mL with H₂O

Results and Discussion

Compounds	% Recovery	
	Tap water	Tap water
	Spike level 500 µg/L 5 Replicates	Spike level 200 ng/L 7 Replicates
1. Desisopropylatrazine	98.4 (5.0)	95.6 (5.8)
2. Hydroxyatrazine	132 (1.3)	109 (11)
3. Desethylatrazine	106 (5.1)	104 (4.0)
4. Simazine	not determined	97.7 (3.9)
5. Cyanazine	not determined	93.1 (3.7)
6. Atrazine	101 (5.0)	101 (4.4)



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WA31763.172, June 2003

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