Waters™

Applikationsbericht

Carbamates in Drinking Water by LC-MS (Endocrine Disruptors)

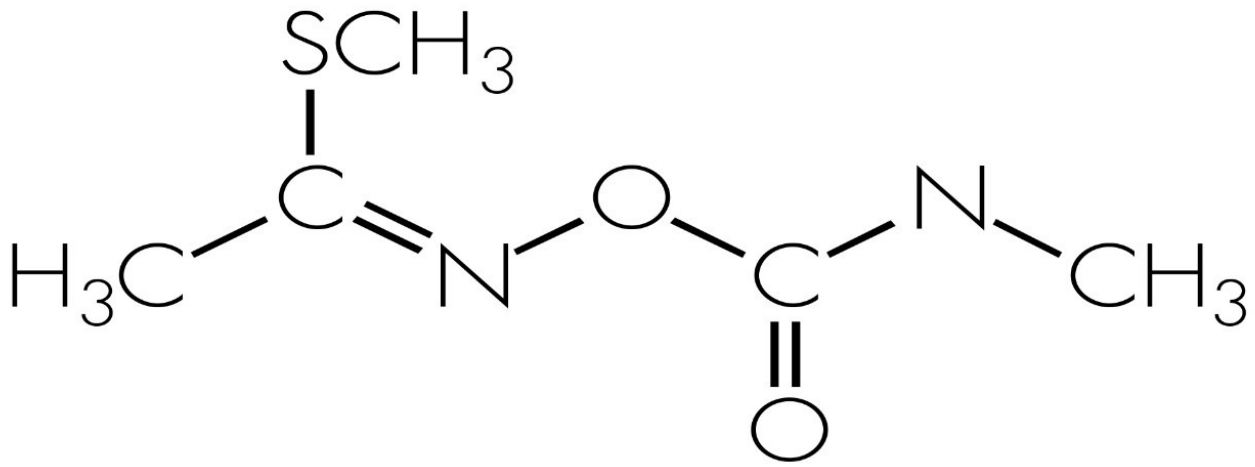
Waters Corporation

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

Abstract

This application brief demonstrates the analysis of carbamates in drinking water by LC-MS.

Introduction



Methomyl

Experimental

HPLC Method

Column:	Symmetry C_{18}, 1.0 x 150 mm, 3.5 µm
Part number:	WAT248059
Mobile phase A:	10% methanol/10 mM ammonium acetate
Mobile phase B:	90% methanol/10 mM ammonium acetate
Gradient:	90% A initial, linear gradient to 90% B in 10 minutes

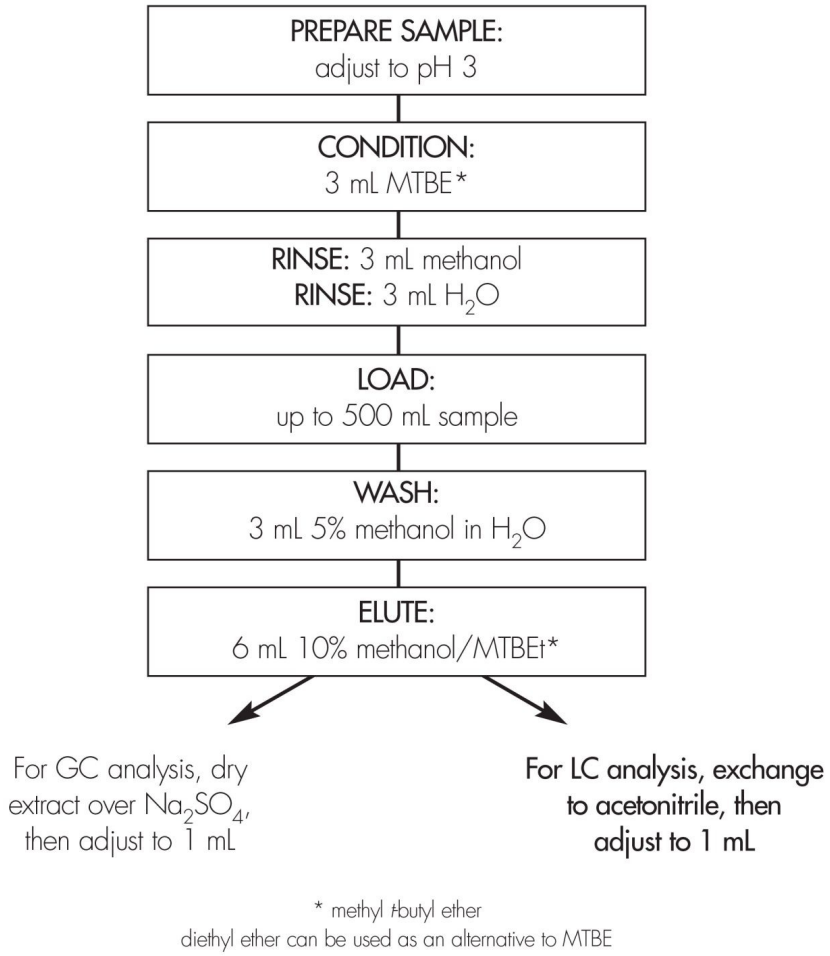
Injection volume:	10 µL
Flow rate:	75 µL/min
Temperature:	35 °C
Instrument:	Waters Alliance Separations Module

MS Conditions

Instrument:	Waters/Micromass ZMD4000
Interface:	Positive Electrospray (ESI+), Multiple Selected-Ion Recording (SIR)

OASIS® SPE METHOD FOR ENDOCRINE DISRUPTORS

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



* methyl *t*-butyl ether
diethyl ether can be used as an alternative to MTBE

Results and Discussion

SIR group	Time (mins)	Compound	Mass	Cone voltage	Dwell time
1	0–9	Aldicarb Sulfoxide	207.1	18 V	0.5 secs
		Aldicarb Sulfone	223.2	25 V	0.5 secs
		Oxamyl	237.2	10 V	0.5 secs
		Methomyl	163.2	15 V	0.5 secs
2	9–11	3-OH Carbofuran	238.2	15 V	1.5 secs
3	0.5–12.5	Aldicarb	208.2	8 V	1.5 secs
4	11.5–14	Propoxur	210.2	18 V	0.4 secs
		Carbofuran	222.2	22 V	0.4 secs
		Carbaryl	202.2	18 V	0.4 secs
5	14–20	Methiocarb	226.2	19 V	0.6 secs

Compounds	% Recovery LC/MS*
	500 ng/L
1. Aldicarb Sulfoxide	74.8 (19)
2. Aldicarb Sulfone	88.7 (16)
3. Oxamyl	83.2 (18)
4. Methomyl	92.3 (8.0)
5. 3-Hydroxycarbofuran	101 (8.6)
6. Aldicarb	79.4 (9.3)
7. Propoxur	103 (13)
8. Carbofuran	95.6 (7.5)
9. Carbaryl	97.7 (14)
10. Methiocarb	81.2 (14)

Featured Products

WA31764.50, June 2003