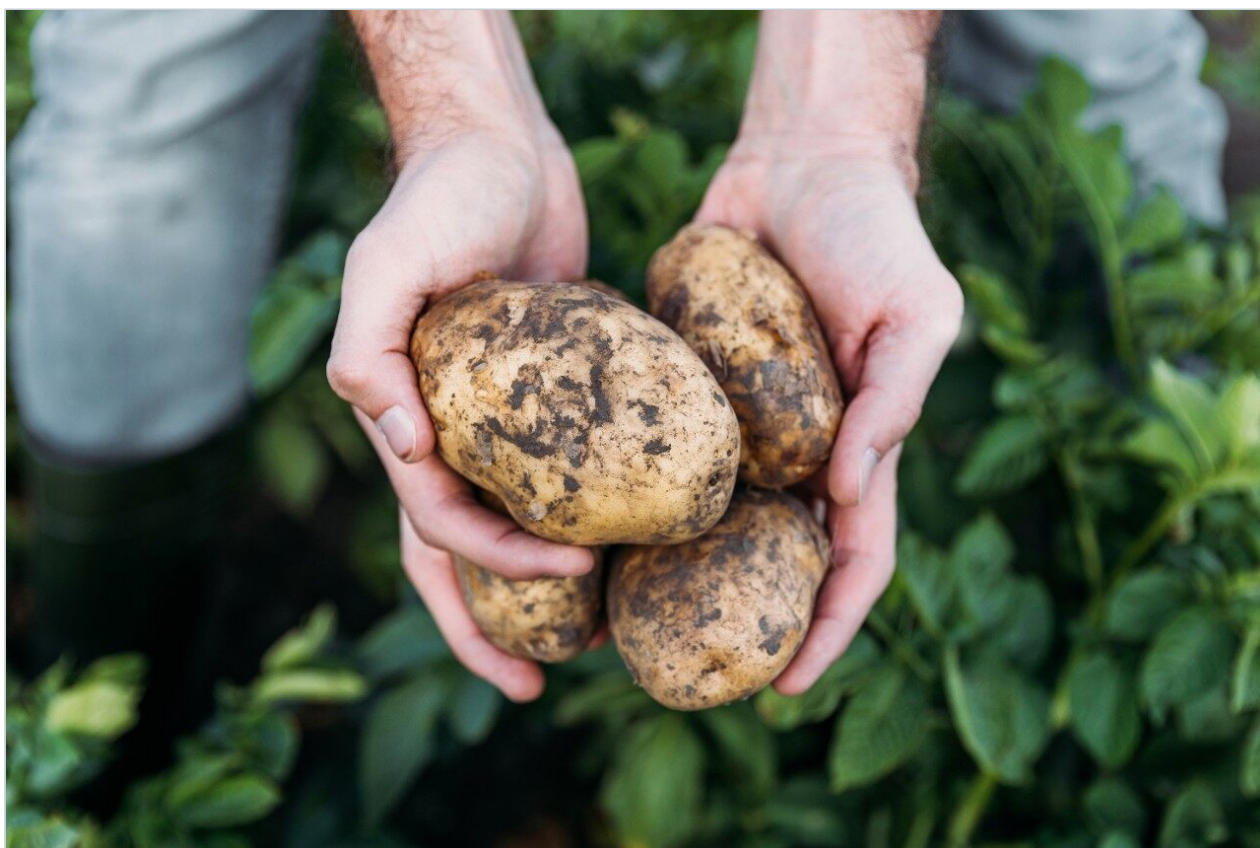


## Propham in Potatoes by GC-MS

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Waters Corporation



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

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### Abstract

This analytical method can be used to monitor Propham residues in potatoes.

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## Introduction

Propham is the active substance used as herbicides and potato sprout inhibitor. This analytical method can be used to monitor Propham residues in potatoes.

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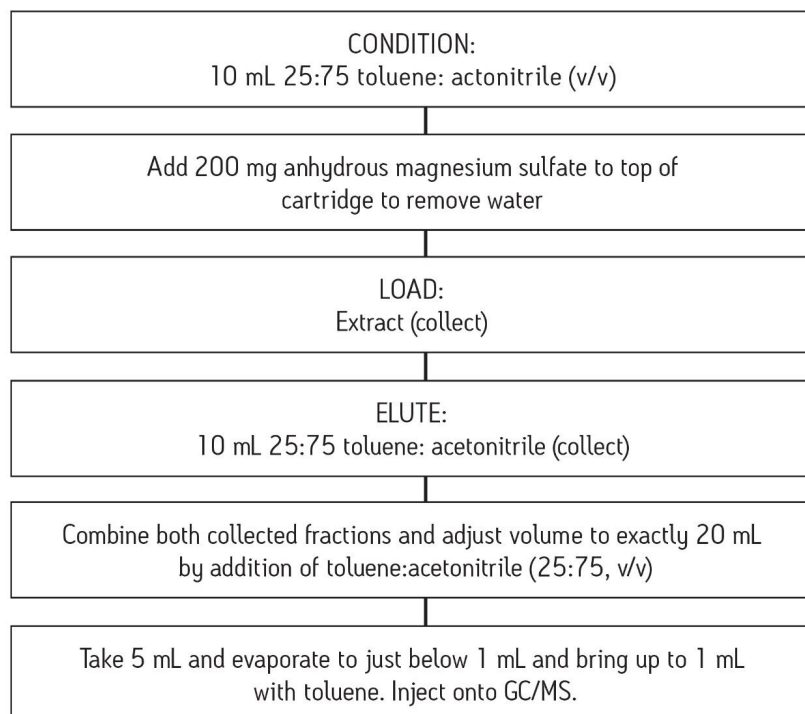
## Experimental

### Pre-treatment

1. Add 15 g of ground potatoes into a 50 mL centrifuge tube.
2. Add 15 mL 1% acetic acid in acetonitrile and shake.
3. Add 1.5 g anhydrous sodium acetate and 6 g anhydrous magnesium sulfate (equivalent to contents of DisQuE Pouch, AOAC method).
4. Centrifuge >1500 rcf for 1 minute.
5. Take out 7.5 mL extract and dilute to 10 mL with 2.5 mL toluene.

## SPE Procedure

Sep-Pak® Vac Carbon Black/Aminopropyl 6 cc/500 mg/500 mg



## GC Conditions

GC System:	Agilent 6890
GC Column:	DB-5ms, 30m x 0.25mm (i.d.), 0.25 µm film. Direct connection of column to injection-port liner
Transfer line to MS:	300 °C
Source temp.:	200 °C
Injection volume:	1 µL splitless
Injection port temp.:	180 °C

Initial temp.:	80 °C
Time at initial temp.:	1 minute
	Then Program at 10 °C/ min to 200 °C
	Then at 25 °C minute to 300, hold 5 minutes

## GC-MS Conditions

GC-MS System:	Waters Quattro micro GC
Ionization mode:	Electron Impact (70 eV)
	Selected-Ion Recording (SIR)

## HP6890 GC Flow1

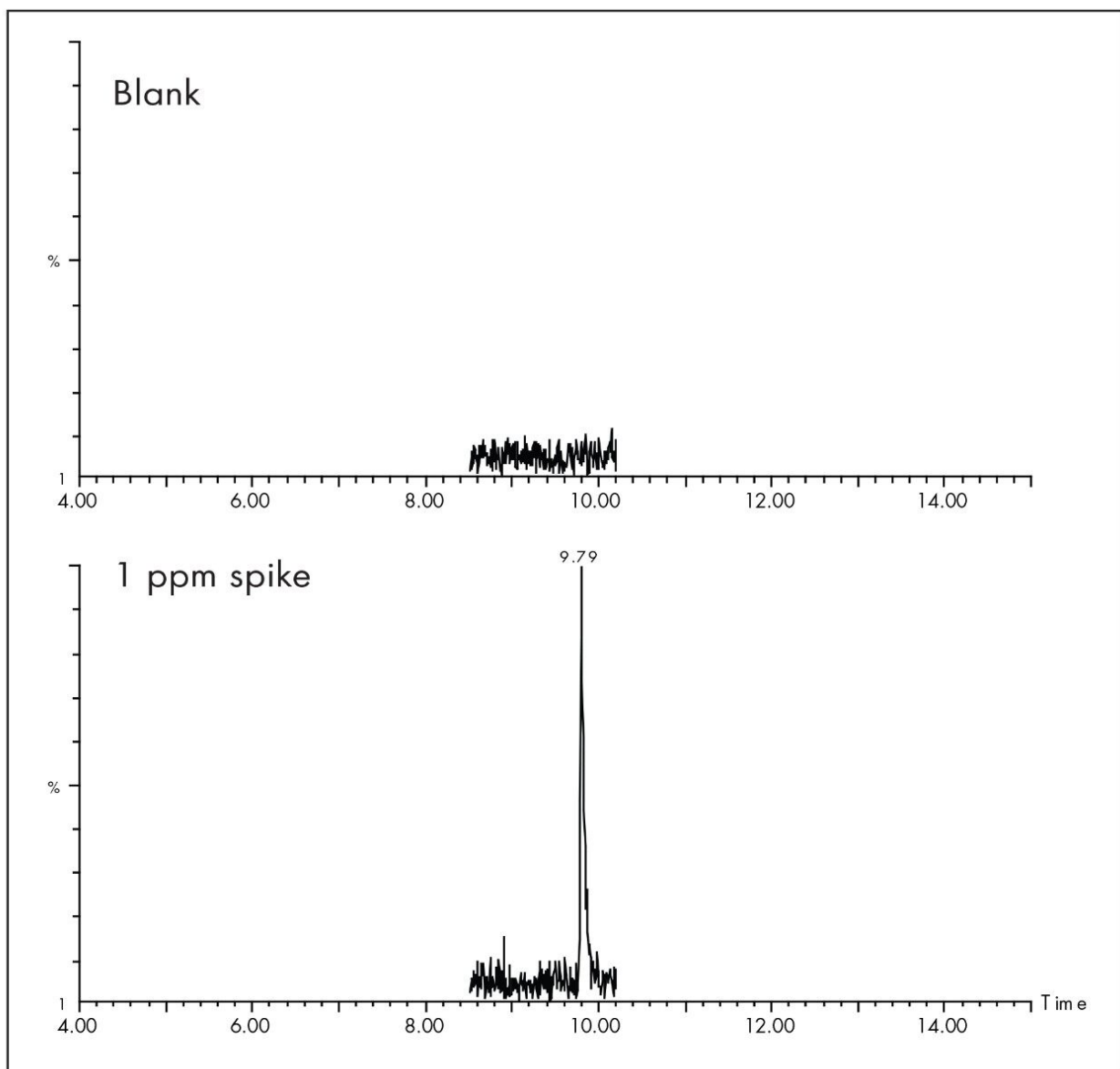
Time (min)	Rate Final (mL/min)	Flow (mL/min)
0.00	50	3
0.50	50	3
0.60	50	1
Initial Flow:	1 mL/min	

GC-MS (SIR)

Channel		Mass
1 (Quantification)		92.8
2 (Confirmation)		119
3 (Confirmation)		120

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Results and Discussion



*Chromatogram of a 1  $\mu\text{g/g}$  spiked potato sample.*

Compound Name: propham 92.8	RT	Area
1 ppm spiked 1	9.78	379.00
1 ppm spiked 2	9.82	382.00
1 ppm spiked 3	9.80	458.00
1 ppm spiked 4	9.79	399.00
1 ppm spiked 5	9.75	421.00
Mean		407.80
RSD (%)		8.01
Recovery (%)		95.73

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*Recovery results for 1 µg/g spiked potato sample.*

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## Featured Products

720002591, April 2008