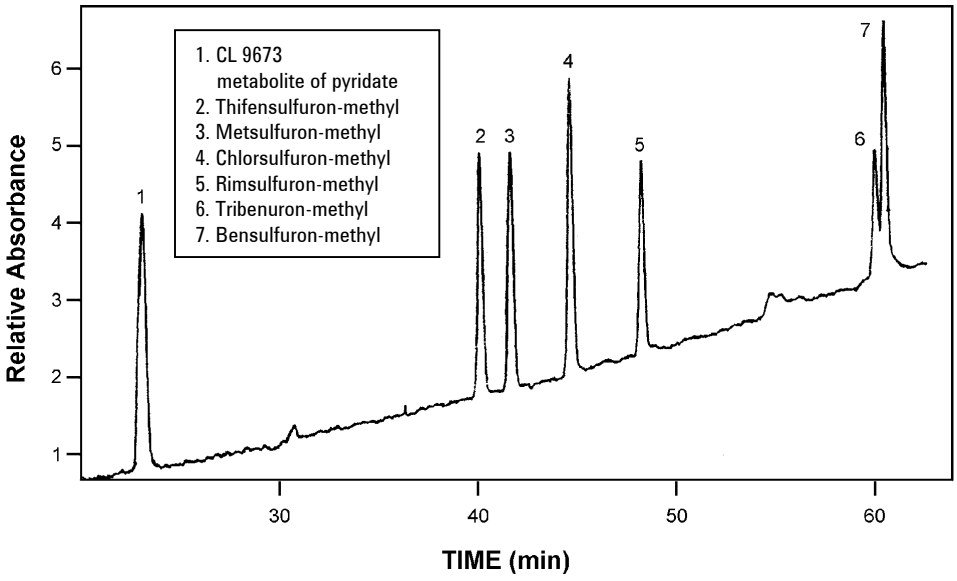
High-Resolution Separation of Sulfonylurea Pesticides

Application

Agrichemical

Robert Ricker



Courtesy of Dr. rer.nat. Claus Schlett, Gelsenwasser AG

Highlights

- *An example of excellent selectivity and peakshape for a new family of pesticides.*
- *ZORBAX SB-C18 has a sterically protected, bonded phase that permits reliable results run-after-run.*

Conditions:
Column: ZORBAX SB-C18, 3.0 x 250 mm (Agilent Part No. 880975-302)
Mobile Phase:
A 0.01% Acetic Acid in H2O
B Acetonitrile, 0.01% Acetic Acid
Inj. Vol.: 50µl UV: (230, 270 nm); Flow: 0.5 mL / min.; 40°C

Gradient Time	%A	%B
2	90	10
70	55	45
85	55	45
89	10	90
94	10	90
95	90	10
110	90	10

Agilent Technologies

Sample preparation

The sulfonylureas are extracted from water as follows:

1. *The samples (1L) are filtered through a glass-fiber filter and are brought to a pH of 3-4 using hydrochloric acid. Then, 10 ml of methanol are added.*
2. *Solid-phase extraction is carried out using 2 g of sorbent.*
3. *The cartridges are conditioned with 6 bed-volumes of H_2O (adjusted to pH 3-4) followed by 6 bed-volumes of methanol.*
4. *The samples are passed through the cartridge at a rate not exceeding 500 ml/hr.*
5. *The cartridges are dried for 45 min with nitrogen gas at a rate of 90 ml/min.*
6. *The samples are eluted from the extraction column using acetone (3 washes of 3 ml each).*
7. *The acetone is carefully evaporated from the eluted sample, and the sample re-dissolved in 100µl acetonitrile, 400µl H_2O, 0.01% acetic acid.*

Robert Ricker is an application chemist based at Agilent Technologies, Wilmington, Delaware.

ACKNOWLEDGMENT

Agilent Technologies Inc. wishes to thank Dr. rer.nat. Claus Schlett, Gelsenwasser AG, who developed the method and provided this chromatogram.

For more information on our products and services, visit our website at:
www.agilent.com/chem

Printed in the USA
April 25, 2002
5988-6287EN

Agilent Technologies