

High-Resolution Separation of Sulfonylurea Pesticides

Application Agrichemical

Robert Ricker



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

Conditions:
Column: ZORBAX SB-C18, 3.0 x 250 mm (Agilent Part No. 880975-302)
Mobile Phase:
A 0.01% Acetic Acid in H20
B Acetonitrile, 0.01% Acetic Acid
Inj. Vol.: 50µl UV: (230, 270 nm); Flow: 0.5 mL / min.; 40°C

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

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.



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 H₂O (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 redissolved in 100µl acetonitrile, 400µl H₂O, 0.01% acetic acid.

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

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

Copyright[©] 2002 Agilent Technologies, Inc. All Rights Reserved. Reproduction, adaptation or translation without prior written permission is prohibited, except as allowed under the copyright laws.

Agilent shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Information, descriptions, and specifications in this publication are subject to change without notice.

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

ACKNOWLEDGMENT

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

Agilent Technologies

