

# Waters column

*A Reprint from*

*Volume VI  
Issue 2, 1996*

*If you would like a subscription,  
or more information,  
please contact your nearest  
Waters Office.*

*Check the Waters website  
for up-to-date information:  
<http://www.waters.com>*

Published by Waters Corporation  
34 Maple Street  
Milford, MA 01757 USA  
Tel: 508-478-2000  
Toll-free: 1-800-252-4752  
Fax: 508-872-1990

Editor: Uwe D. Neue, Ph.D.  
ISSN #1084-0540

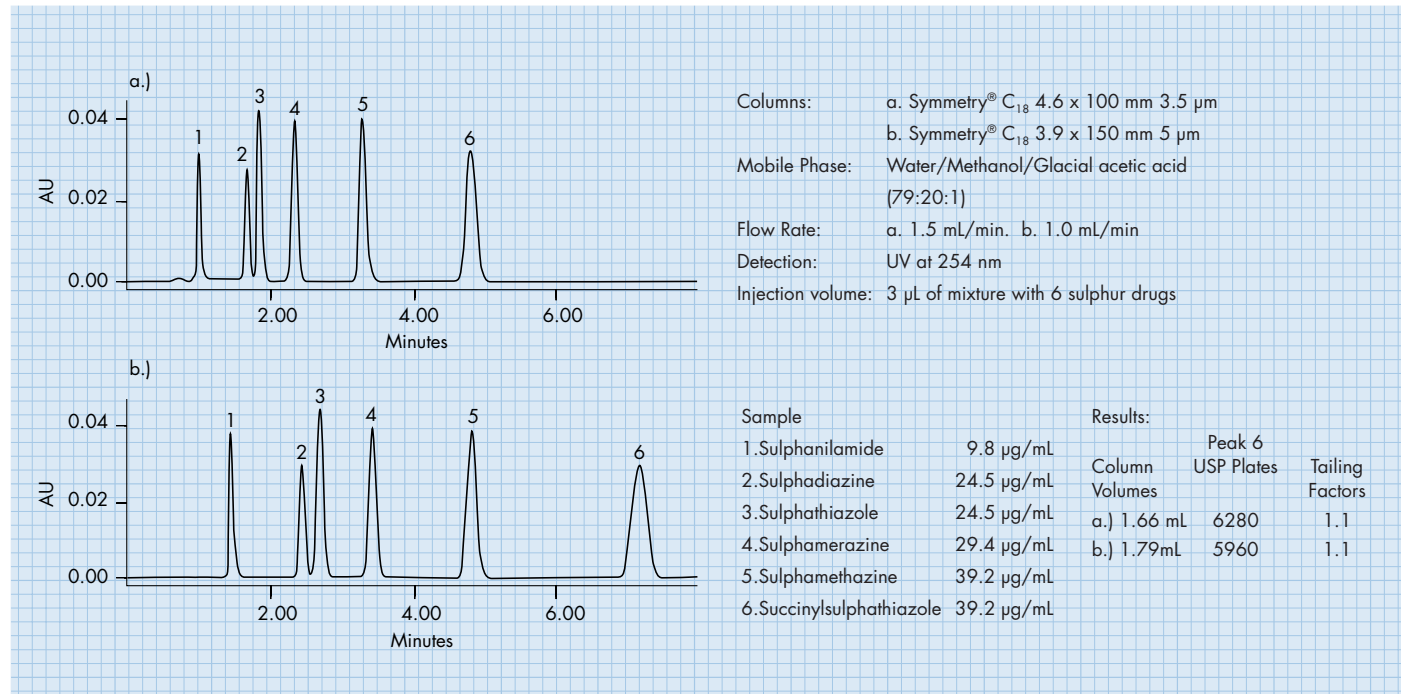
# Rapid Analysis on Symmetry® 3.5 µm Column

## Objective:

To demonstrate that 3.5 µm packing allow shorter analysis times without sacrificing efficiency or sensitivity.

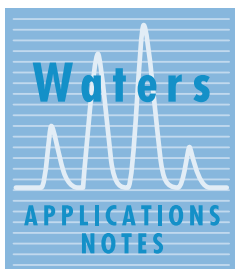
## Details:

Efficiency is directly related to column length. Therefore, reducing column length results in a decrease in efficiency. Decreasing the particle size from 5 µm to 3.5 µm gives an increase in efficiency which compensates for this loss when using shorter columns. Hence, faster analysis can be obtained with the shorter 3.5 µm column without a decrease in efficiency. Maintaining the efficiency on the similar volume columns also results in no change in sensitivity.



## System:

The HPLC system consisted of the Waters 626 LC System, 717plus Autosampler, and the 996 Photodiode Array Detector. Control and results management were provided by a Millennium® 2010 Chromatography Manager.



## **Millennium® 2010 Chromatography Manager**

*Advanced computer technology simplifies accessing, interpreting, and reporting your results.*

The productivity of today's chromatography is centered around the ability to find, generate, summarise, and report results in a way that meets your needs and complies with any regulatory requirements. The Millennium relational database lets you create your own view filters to customise the way you sort your information, such as "lotCode".

- Using the database, you can track a method history giving you audit trail capability that ensures total security of your raw data and results. In addition, you can specify "Access Type" which allows you to "lock" your methods for even greater security.
- The database keeps track of your instruments, triggering an alarm when scheduled maintenance is required. The Millennium relational database lets you view the injection information on any calibration point at any particular point in time on a processing sequence. This gives you a detailed account of the processing method for that injection, ensuring an accurate audit trail for regulatory compliance.
- The Millennium Chromatography Manager can provide acquisition and control for as many as four chromatographic systems, including three HP5890 GC.
- The Millennium Report Publisher has the capability to give you exactly what you want.

## **Waters 996 Photodiode Array Detector**

*Complete Spectral Data-Complete Confidence in Peak Purity and Identity.*

With Waters 996 Photodiode Array Detector, you can be confident that if there is an impurity in your sample, you will find it; that your compound is really what you report it to be and not something else. Every spectral detail of your sample is rapidly, easily, and accurately detected. Every peak is analysed with mathematical precision so you can be sure to assess the purity of peaks and confirm their identity. And you will never have to trade off resolution against sensitivity.

- The 996 PDA Detector lets you look at your results in a variety of ways - even while a separation is under way.
- Absorbency measurement over the entire 190-800 nm wavelength range.
- The MaxPlot feature of the Millennium PDA Software automatically detects UV/Vis absorbing compounds anywhere within the 190-800 nm range. It measures their absorbance maxima, and plots a peak for each compound at its absorbance maximum, creating a composite chromatogram of all of the compounds it has detected.

## **Waters 717plus Autosampler**

Waters 717plus Autosampler is a fully programmable autosampler for High-Pressure Liquid Chromatography.

## **Waters 626 LC System**

*Innovative LC technology.*

The Waters 626 LC System combines advanced polymeric technology and low dispersion system volume into a liquid chromatograph that provides the highest level of performance available in a non-metallic system. The 626 LC System is optimised for ion exchange, gel filtration, affinity, hydrophobic interaction and reversed-phase chemistries used in micro-bore, analytical or micro preparative methods relevant to the chemist. The 626 LC System has maximum system operating pressure of up to 4000 psi.

### **For more Information on**

*For more information on these products please check box 17-21 on the Business Reply Card.*