

*Use temperature to  
increase your  
LC performance*

**Polaratherm™  
Series 9000**

*High productivity*

*High speed*

*High efficiency*

*Unique selectivity*

*Less organic solvent*

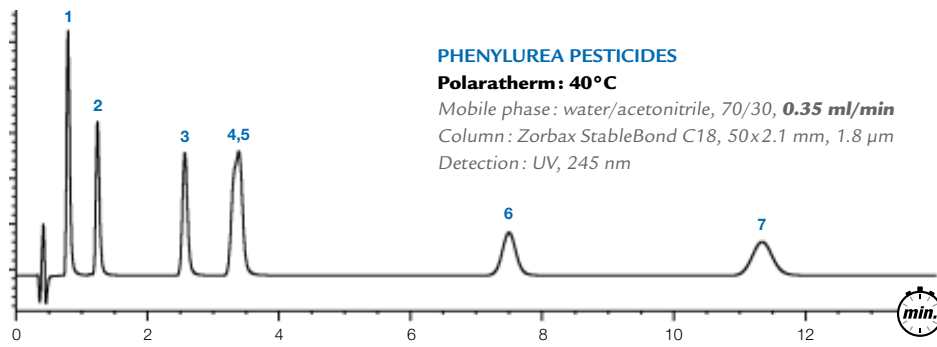
*Green chromatography*



**SANDRASLERITY TECHNOLOGIES, INC.**

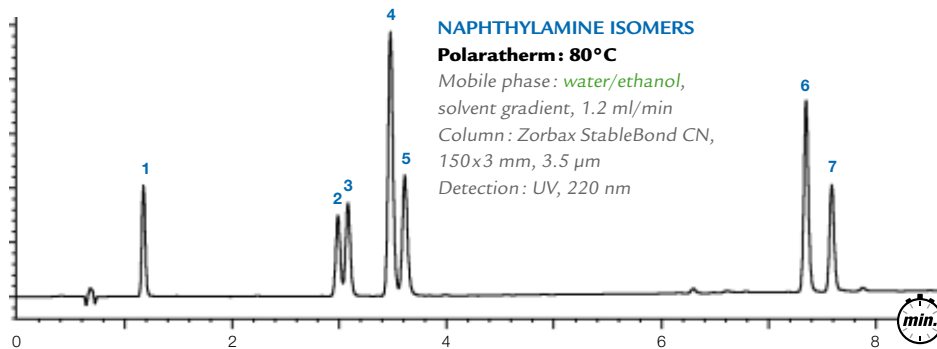
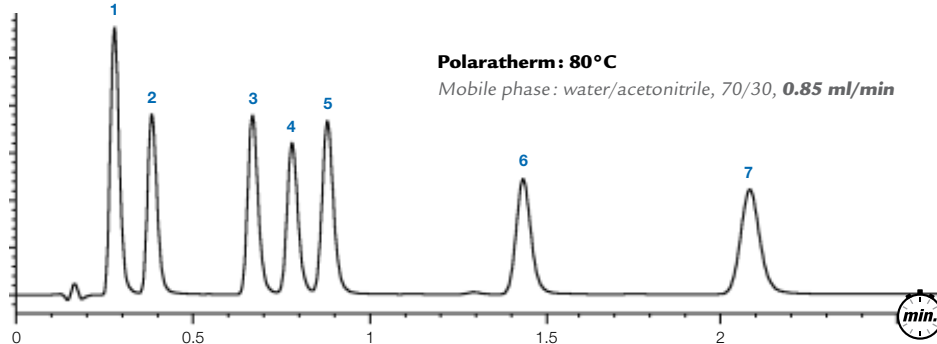
USA, Canada, and Latin America: [www.selerity.com](http://www.selerity.com) • [jodyclark@selerity.com](mailto:jodyclark@selerity.com) - Other countries: [www.richrom.com](http://www.richrom.com) • [sales@richrom.com](mailto:sales@richrom.com)

Environmental  
Selectivity/Speed



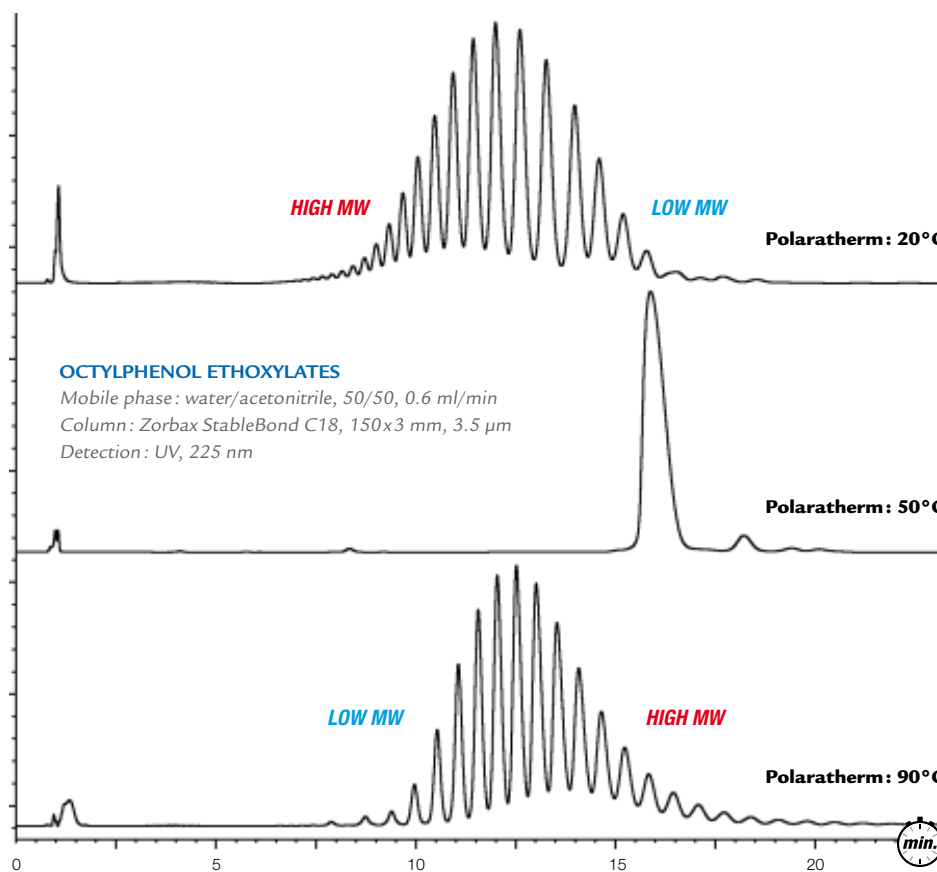
- 1 Fenuron
- 2 Metoxuron
- 3 Chlortoluron
- 4 Diuron
- 5 Isoproturon
- 6 Linuron
- 7 Chloroxuron

Chemical  
Green Chromatography

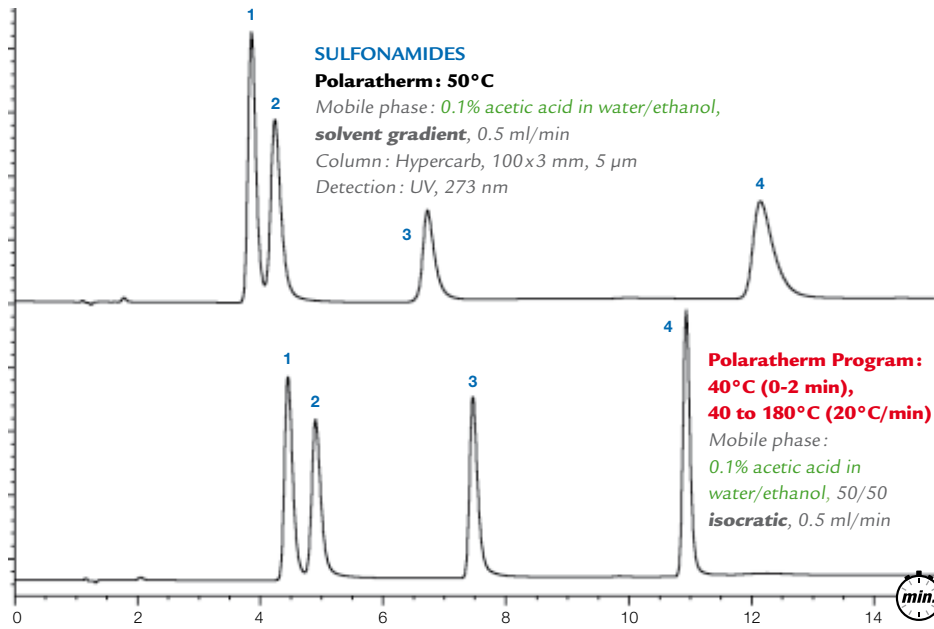


- 1 Aniline
- 2 α-naphthylamine
- 3 β-naphthylamine
- 4 α-naphthol
- 5 β-naphthol
- 6 N-phenyl-α-naphthylamine
- 7 N-phenyl-β-naphthylamine

Polymers - Industrial  
Selectivity

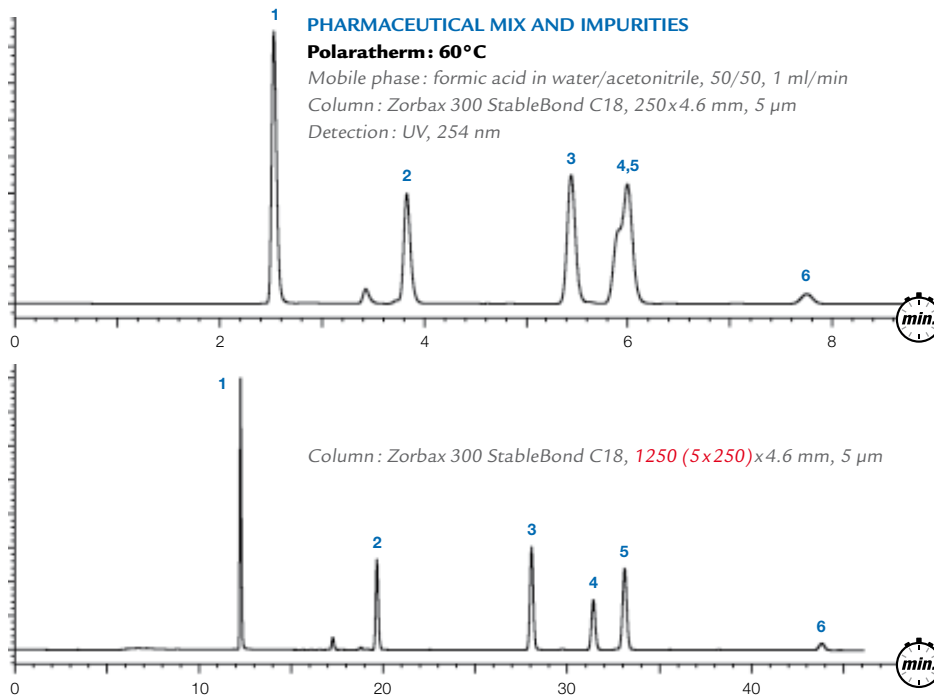


Pharmaceutical Green Chromatography  
Temperature Programming

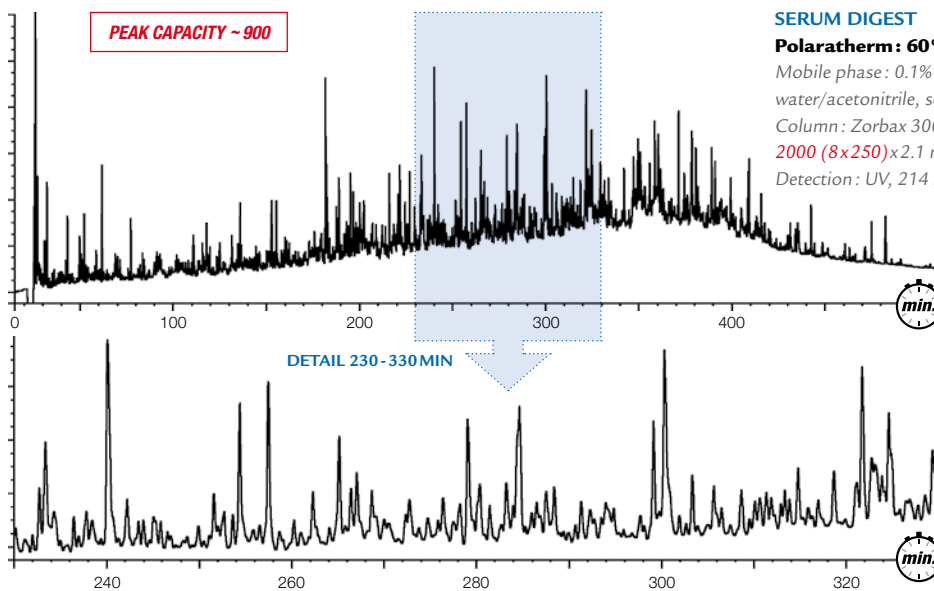


- 1 Sulfamethazine
- 2 Sulfamethizole
- 3 Sulfachlorpyridazine
- 4 Sulfamethoxine

Pharmaceutical High Efficiency/Resolution



Biopharmaceutical High Efficiency/Resolution



# Polaratherm™ Series 9000

The Polaratherm™ Series 9000 is a product from SandraSelerity Technologies, Inc.

The Polaratherm is a **stand alone column compartment** capable of controlling **column temperature from subzero to 200°C in isothermal and fast temperature programming modes**. Temperature can be applied as an active variable in HPLC separations. The Polaratherm is an inexpensive addition to already existing capital equipment and enables to greatly **enhance productivity**.

The Polaratherm can be operated in various modes:

- Elevated Temperature LC
- Subzero Temperature LC
- Fast Temperature Programmed LC (as in gas chromatography)

## SE HIGH SPEED

Decreased solvent viscosity at elevated temperature leads to lower back pressure. This allows the use of higher flow rates.

## SE HIGH EFFICIENCY AND RESOLUTION

At elevated temperature the solute transfer from the mobile phase to the stationary phase is more efficient. This results in high efficiency, even at elevated flow rates. The low back pressure due to the decreased solvent viscosity at elevated temperature allows the use of smaller particle sizes and/or longer columns.

## SE LOWER CONSUMPTION OF ORGANIC SOLVENTS GREEN CHROMATOGRAPHY

Reduce the amount of organic solvent in the mobile phase.  
Use thermal gradients instead of solvent gradients and recycle mobile phase.  
Use only water and ethanol for separations at elevated temperatures.

## SE UNIQUE SELECTIVITY

Tune selectivity with temperature.

## SE OTHER FEATURES

Increased detectability, less band broadening.  
Improved peak shape for basic solutes.

*Full control of the  
Polaratherm Series 9000  
with Agilent Chemstation,  
Agilent EZChrom, and  
Waters Empower  
implemented software.*

## Efficient heating of incoming mobile phase



Preheater for **active heating** of the mobile phase ①.

Secure-Fit™ column connector.

## Efficient temperature control of column effluent

Combination of **passive heat exchange** ② and **active Peltier thermostating** ③.



SANDRASELERITY TECHNOLOGIES, INC.



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