Cough Syrup Analysis

Application

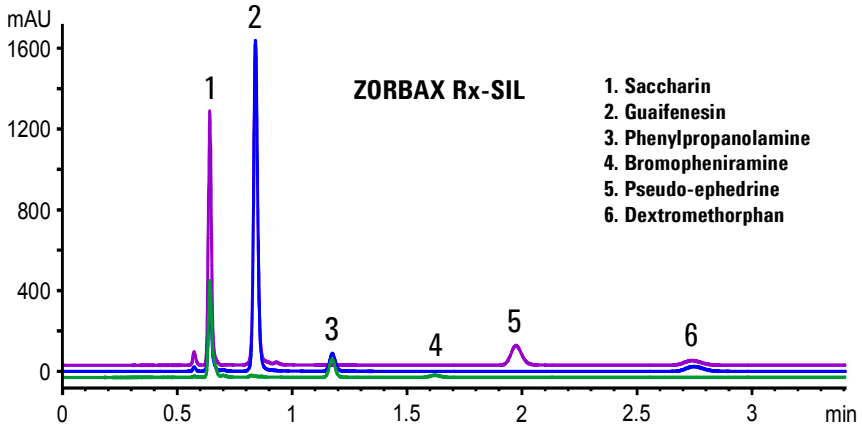
Pharmaceutical

Robert Ricker

Amines can be difficult to analyze by reversed-phase HPLC. Obstacles such as excessive retention and poor peak shape must be overcome for rugged chromatography. These obstacles are caused mostly by interaction of the amine with unbonded silanols of the reversed-phase packing.

Here, silanol interaction is used as an advantage to separate compounds commonly associated with cough syrups. Using Agilent ZORBAX Rx-SIL, with a reversed-phase mobile phase, achieves the desired separation. Under these conditions, retention of organic amines is mainly due to electrostatic interaction.

Overlay of Three Different Cough Syrup Formulas



Conditions:	
HPLC System:	Agilent 1100 with quaternary pump
Column:	ZORBAX Rx-SIL, 4.6 x 150 mm Agilent PN 883975-901
Mobile Phase:	MeOH: $K_2H_3PO_4$, 20 mM pH 7 (69:31)
Detection:	UV 217 nm
Flow:	2 mL/ min.
Temperature:	ambient

Note: Rx-SIL columns are shipped containing normal phase solvent. They must be flushed with miscible solvent such as THF before equilibrating with aqueous mobile phase.

Highlights

- *ZORBAX Rx-SIL with reversed-phase eluent is an option for analysis of problematic amines.*
- *ZORBAX Rx-SIL with reversed-phase eluent offers unique selectivity, often very different than bonded-phase selectivity.*
- *ZORBAX Rx-SIL particles are stronger than xerogel silicas and are more resistant to dissolution.*

Agilent Technologies

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

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
5988-6417EN

Agilent Technologies