High-Speed Separation of Parabens

Application

Food Analysis

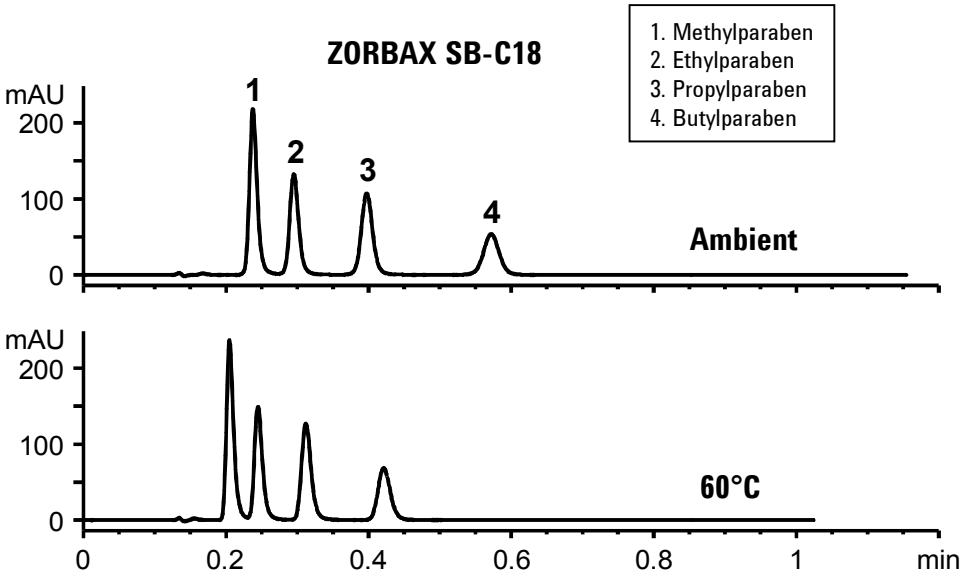
Robert Ricker

Parabens, or para-hydroxy benzoic acid alkyl esters are popular preservatives used in the cosmetic and food industry to battle microbe degradation. Analysis time of less than one minute is accomplished with a Rapid Resolution SB-C18, 4.6 x 30 mm column. Columns with particle sizes under 5 µm and dimensions up to ten-times smaller than traditional analytical-size columns are ideal for high-speed methods. If desired, increasing temperature cuts analysis time further.

Extra-column volume is a crucial factor in chromatographic performance. Here, no modification to the modern instrument is necessary for optimal resolution.

Operating Conditions:

HPLC System:	Agilent 1100 with quaternary pump
Column:	ZORBAX StableBond-C18 Rapid-Resolution (3.5 µm) Cartridge-Column, 4.6 x 30 mm
	Agilent Part No. 833975-902
Mobile Phase:	0.1% H_3PO_4: ACN, (50:50)
Detection:	UV 254 nm with standard flow cell (13 µL)
Flow:	2 mL/ min.
Inj. Volume:	1 µL
Temperature:	top: ambient, bottom: 60°C



Highlights

- *Reducing column length and particle size simultaneously can:*
  - *Reduce analysis time*
  - *Maintain resolution*
  - *Reduce solvent use*
- *Elevated operating temperature is effective in reducing run time.*
- *ZORBAX StableBond SB-C18 can operate at higher temperatures and lower pH than other commercial reversed-phase columns.*

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