

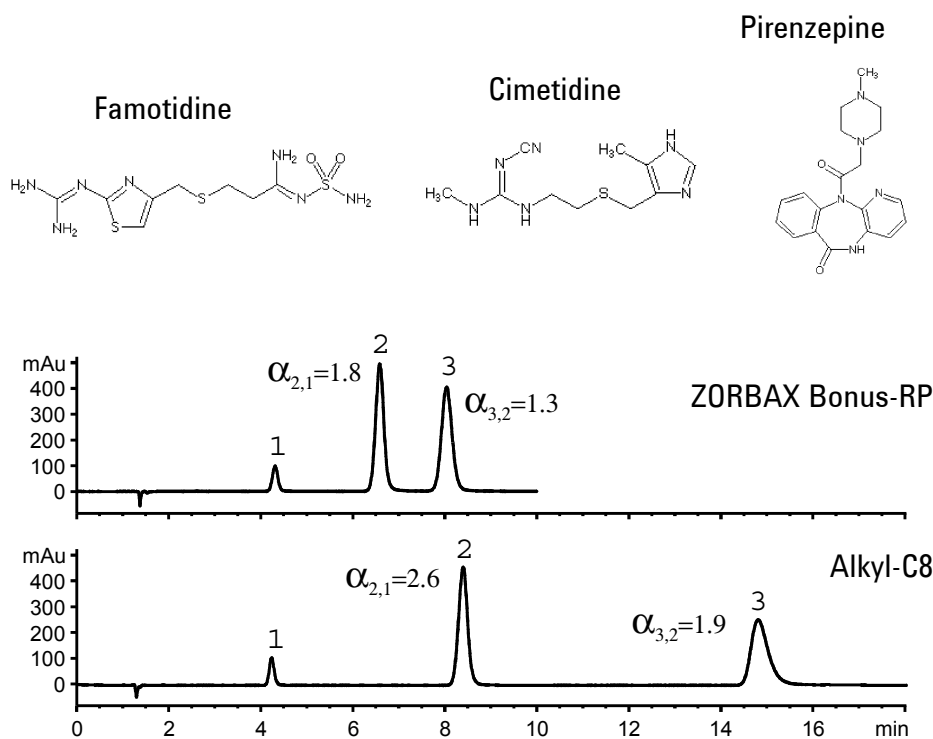
# Ulcer-Treatment Drugs at Intermediate pH on ZORBAX Bonus-RP

Application  
Pharmaceutical  
Robert Ricker

This medication for stomach ulcers, is a mixture of basic drugs. At intermediate pH, these compounds elute from Agilent ZORBAX Bonus-RP with reduced peak tailing compared to a conventional alkyl C8 column (note peak #3). Superior column performance of the Bonus-RP is attributed to combining ultrapure Type B silica support with a stationary phase that has an amide group embedded in the alkyl chain, bulky (sterically-protecting) diisobutyl groups, and dense endcapping.

## Highlights

- **Long Life over a wide pH range:**
  - Sterically protecting diisopropyl groups resist hydrolysis and bonded phase loss at low pH.
  - Dense triple-endcapping protects silica support from dissolution at intermediate pH.
- **Good Peak Shape:** Compared to conventional alkyl columns, Bonus-RP often produces superior peak shapes of polar or ionizable compounds at intermediate pH (compare peak #3 in chromatograms).
- **Alternate Selectivity:**
  - Agilent ZORBAX Bonus-RP is a unique polar-linked bonded phase that can provide different selectivity and can be used in highly aqueous mobile phase without phase collapse.



**Conditions:**  
HPLC System: Agilent 1100 with quaternary pump  
Column: ZORBAX Bonus-RP, 4.6 x 150 mm, Agilent PN 883668-901  
Mobile Phase: Na citrate, 20 mM, pH 6.1; MeOH, (80:20)  
Detector: UV 220 nm  
Flow: 1 mL/min.  
Temperature: ambient

1. Famotidine  
2. Cimetidine  
3. Pirenzepine



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](http://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  
5988-6418EN



**Agilent Technologies**