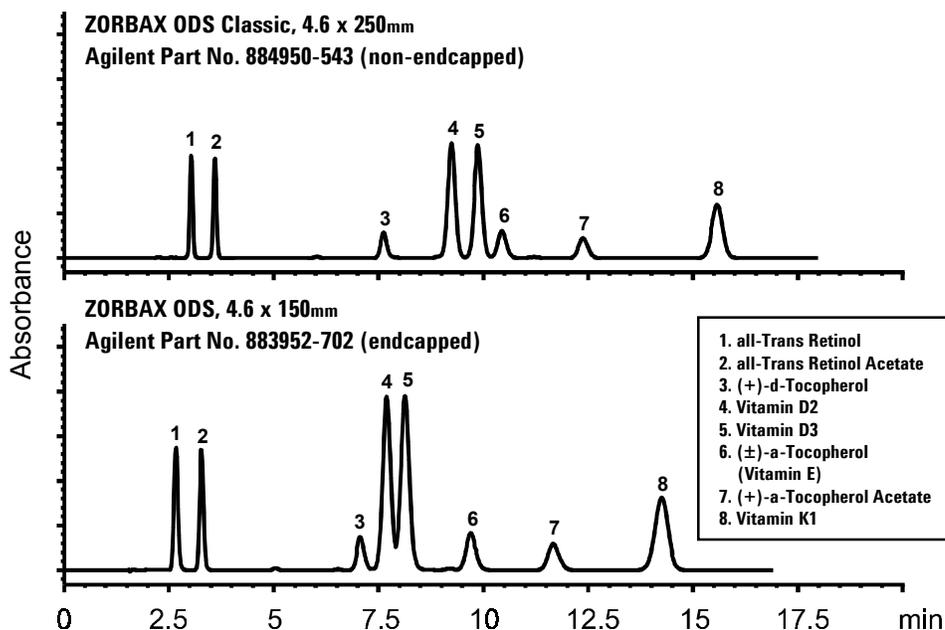


# Separation of Vitamin D2 from D3 and Other Fat-Soluble Vitamins

Application  
Food Analysis  
Robert D. Ricker

Analysis of fat-soluble vitamins is of widespread importance in clinical diagnosis, general research, and food product analysis. Separation of vitamins D2 and D3 is particularly difficult. Change in retention and resolution of these D vitamins and others is shown for both a classic, non-encapped Agilent ZORBAX ODS column and its encapped counterpart. Encapping of bonded phases is performed in an effort to minimize secondary interaction of polar sample components with the column packing.



Conditions:  
LC: Hewlett Packard HP 1050  
Mobile Phase: 75% ACN : 25% MeOH  
Det.: UV: 325 nm for 4 min., 280 nm after  
Flow: 1.0 mL/min.; 40°C  
Inj Vol: 5 µL (10 µg / µL)

## Highlights

- The non-encapped ZORBAX ODS column outperforms the encapped ODS in obtaining resolution of vitamins D2 and D3.
- Encapped and non-encapped versions of the ZORBAX ODS column are both able to separate a wide variety of fat-soluble vitamins; although, with differing selectivities (see peak pairs 3-4 and 5-6).



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  
5988-6350EN



**Agilent Technologies**