



COSMOSIL

Octadecyl Bonded HPLC Column

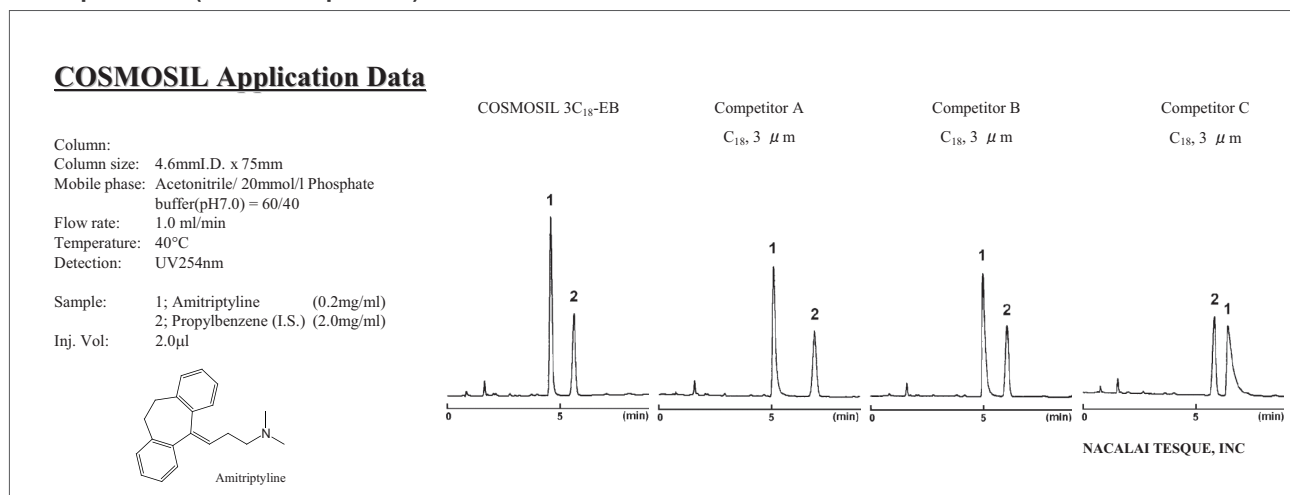
COSMOSIL 3C<sub>18</sub>-EB

- **Excellent for Basic compounds**
- **Improved separation for acidic or metal coordination compounds**
- **Simple mobile phase conditions**

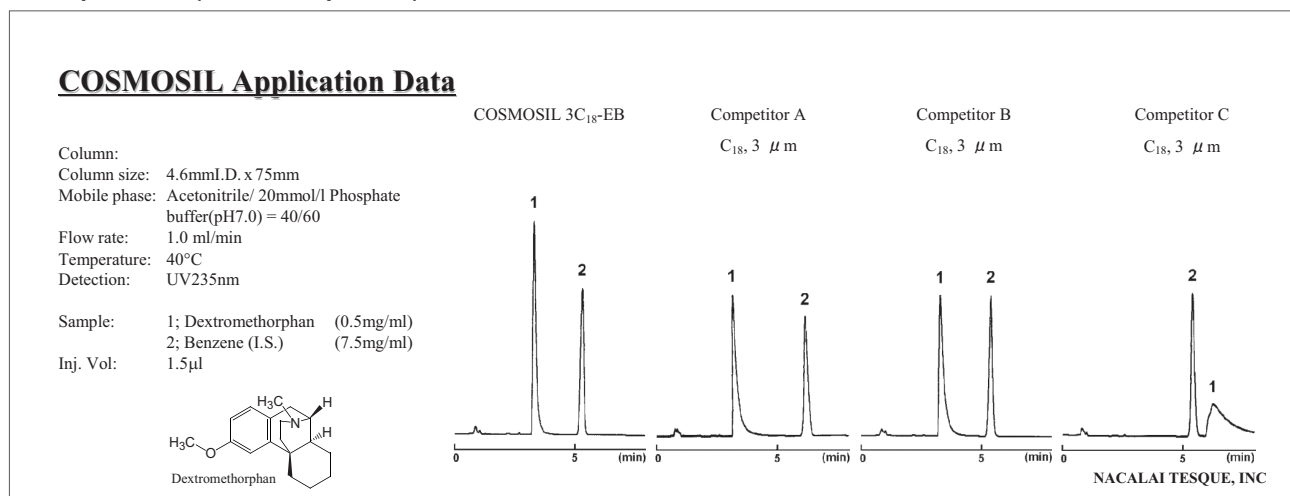
### Analysis of Basic Compounds

Conventionally end-capped C<sub>18</sub> columns still have many residual silanol groups on the silica surface of stationary phase that can form ionic bonds with basic compounds. The resulting peak tailing makes accurate quantification of analytes difficult, especially in trace analyses. COSMOSIL 3C<sub>18</sub>-EB with a better end-capping treatment offers improved peak shape and separation particularly for basic compounds.

#### Comparison 1 (Basic Compounds)



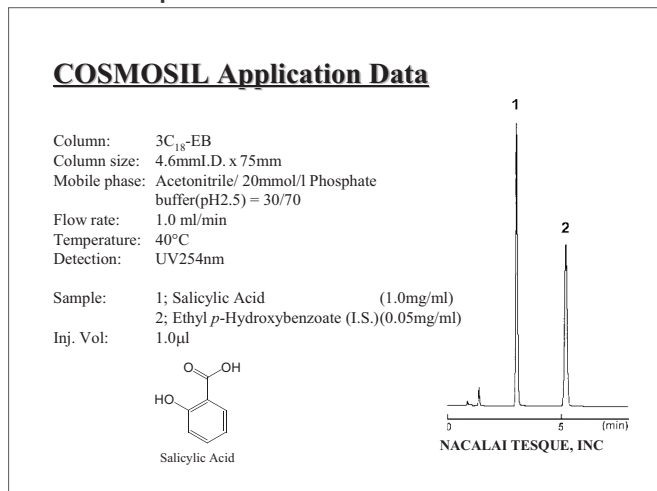
#### Comparison 2 (Basic Compounds)



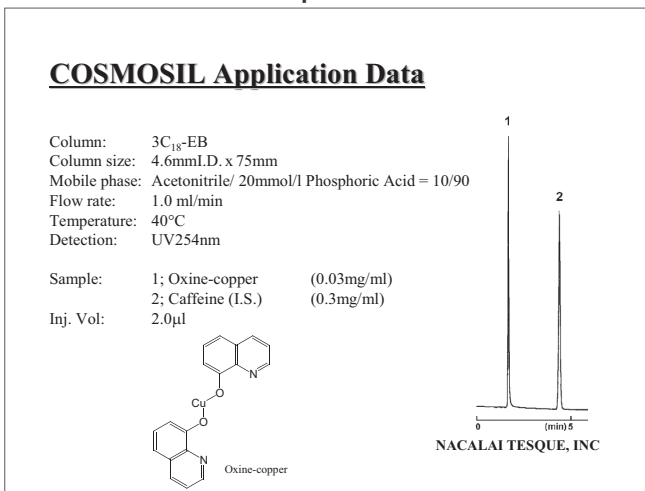
## Analysis of Acidic or Metal Coordination Compounds

Acidic or metal coordination compounds can also form bonds with residual silanol groups and metal impurities causing peak tailing. COSMOSIL 3C<sub>18</sub>-EB with a better end-capping treatment and high purity silica gel offers improved peak shape and separation for acidic or metal coordination compounds.

### • Acidic Compounds



### • Metal Coordination Compounds



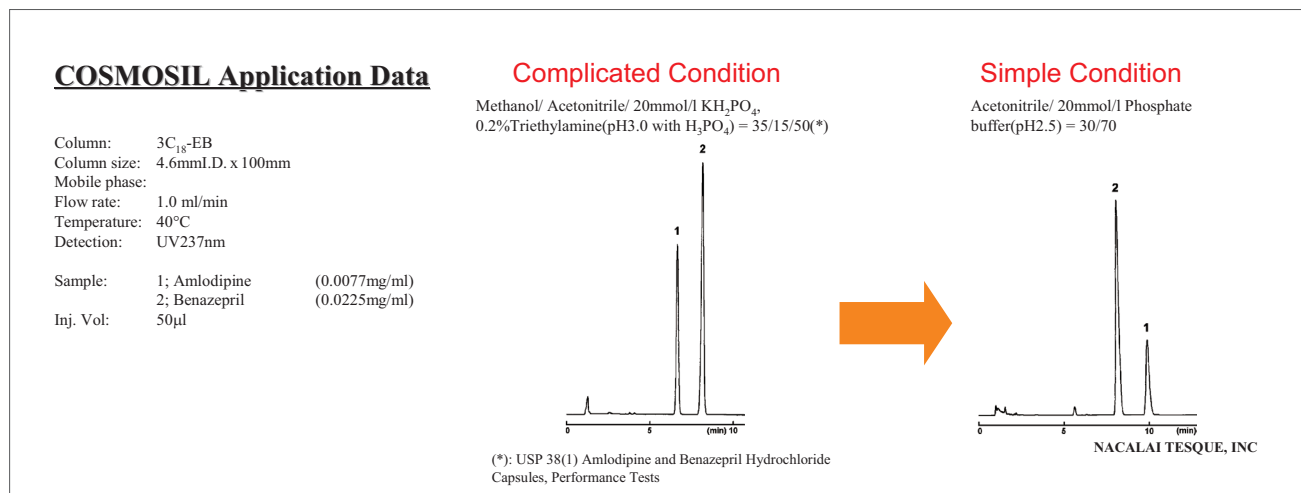
## Synthesis Reproducibility

If you use insufficiently end-capped C<sub>18</sub> columns for basic compound analyses, you may need to spend much time adjusting mobile phase conditions. You may need

- 1) more than 3 or more organic solvents or buffers
- 2) ion-pair reagents or additives
- 3) buffers in different pH

In addition, the complexity of the mobile phase often is detrimental to reproducibility. COSMOSIL 3C<sub>18</sub>-EB with a new end-capping treatment allows good peak shape and separation using simple mobile phase conditions.

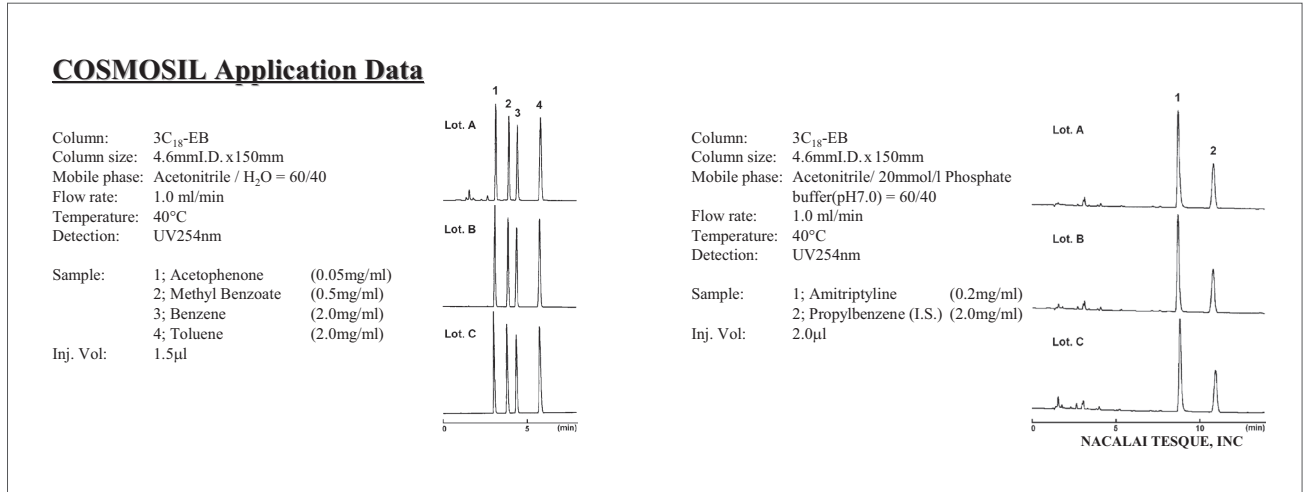
### • Analysis with Simple Condition



## Routine Analysis

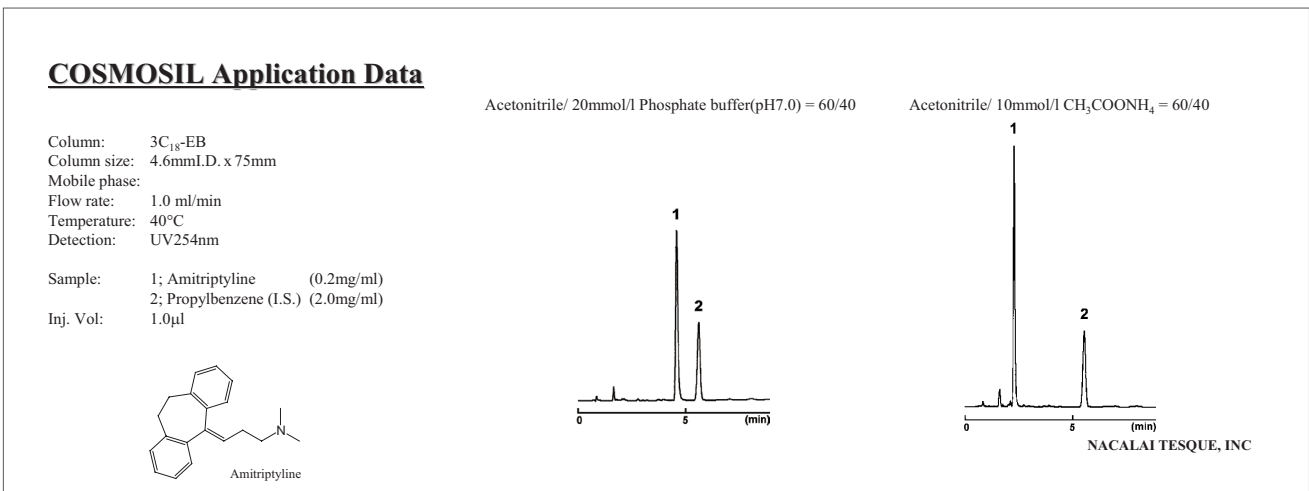
3C<sub>18</sub>-EB has excellent synthesis reproducibility and column-to-column reproducibility, so it is applicable in routine analysis such as quality control of drugs.

### Excellent Synthesis Reproducibility

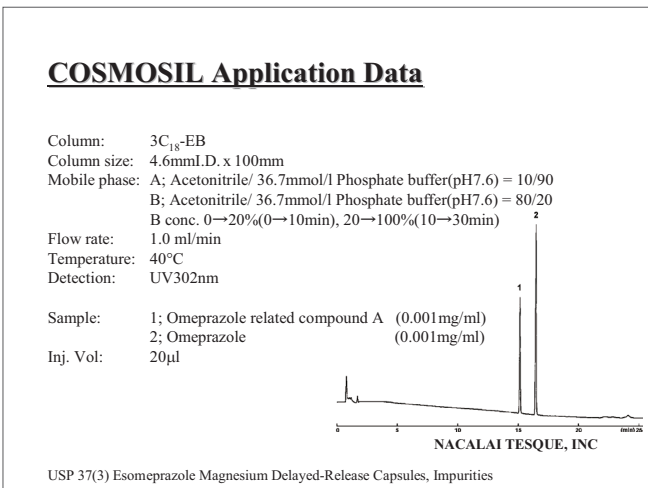


## Analysis under Ammonium Acetate Buffer

COSMOSIL 3C<sub>18</sub>-EB produces sharp peaks using ammonium acetate buffer in LC-MS.



## Analysis of standards in USP



## Ordering Information

Product Name	Column Size	Product Number
COSMOSIL 3C <sub>18</sub> -EB Packed Column	2.0 mm I.D. x 50 mm	09794-21
	2.0 mm I.D. x 75 mm	09795-11
	2.0 mm I.D. x 100 mm	09796-01
	2.0 mm I.D. x 150 mm	09797-91
	2.0 mm I.D. x 250 mm	09798-81
	3.0 mm I.D. x 50 mm	09799-71
	3.0 mm I.D. x 75 mm	09800-21
	3.0 mm I.D. x 100 mm	09811-81

Product Name	Column Size	Product Number
COSMOSIL 3C <sub>18</sub> -EB Packed Column	3.0 mm I.D. x 150 mm	09814-51
	3.0 mm I.D. x 250 mm	09827-91
	4.6 mm I.D. x 50 mm	09840-01
	4.6 mm I.D. x 75 mm	09841-91
	4.6 mm I.D. x 100 mm	09842-81
	4.6 mm I.D. x 150 mm	09843-71
	4.6 mm I.D. x 250 mm	09844-61
COSMOSIL 3C <sub>18</sub> -EB Guard Column	4.6 mm I.D. x 10 mm	09839-41

Other size may be available. Please enquire.

For research use only, not intended for diagnostic or drug use.



**NACALAI TESQUE, INC.**  
 Nijo Karasuma, Nakagyo-ku, Kyoto 604-0855 JAPAN  
 TEL : +81-(0)75-251-1730  
 FAX : +81-(0)75-251-1763  
 Website : [www.nacalai.com](http://www.nacalai.com)  
 E-mail : [info.intl@nacalai.com](mailto:info.intl@nacalai.com)