

# 5. Normal Phase Columns

## COSMOSIL SL-II



- High purity silica gel (>99.99%) with special treatment
- Suitable for preparative separation

Suitable Samples

- Fat-soluble vitamins, natural products, phospholipids, structural analogs, low-MW drugs, etc.

### Specifications

Packing Material	SL-II
Silica Gel	High purity porous spherical silica
Average Particle Size	3, 5, 15 $\mu\text{m}$
Average Pore Size	120 $\text{\AA}$
Specific Surface Area	300 $\text{m}^2/\text{g}$
Features	<ul style="list-style-type: none"> <li>• High purity silica gel (&gt;99.99%) with special treatment</li> <li>• Suitable for preparative separation (higher resolution than medium-pressure or open chromatography)</li> </ul>

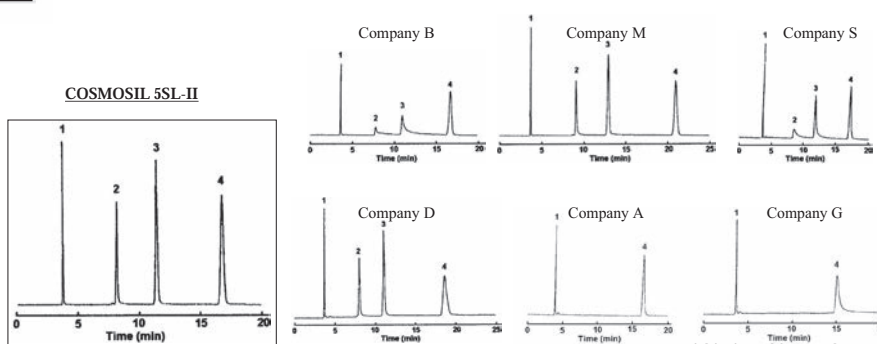
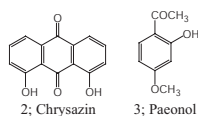
### Comparison with Competitors' Columns in Separation of Phenols

Ultra-pure silica gel of more than 99.99% purity is used for the COSMOSIL SL-II packed column series. This column provides improved separation and reproducibility for compounds with phenol groups without ionic additives by using mobile phases of hexane and ethanol.

#### COSMOSIL Application Data

Column: \*\*  
 Column size: 4.6mm I.D. × 250mm  
 Mobile phase: Hexane/ Ethyl Acetate = 95/5  
 Flow rate: 1.0 ml/min  
 Temperature: 30°C  
 Detection: UV254nm

Sample: 1; p-Xylene (0.004  $\mu\text{l}$ )  
 2; Chrysin (0.2  $\mu\text{g}$ )  
 3; Paeonol (0.4  $\mu\text{g}$ )  
 4; p-Cresol (0.004  $\mu\text{l}$ )



### Comparison with Medium-Pressure Columns

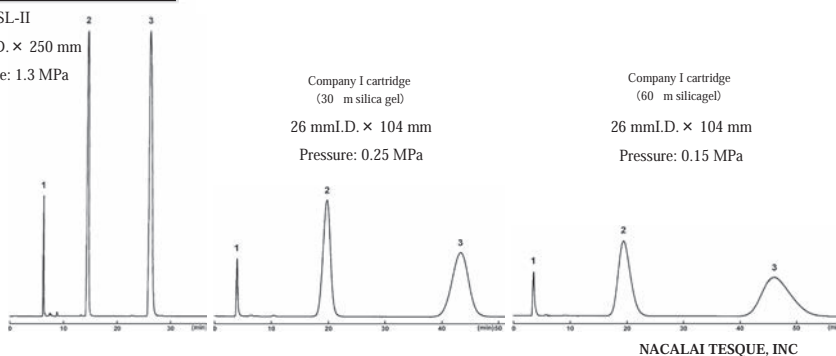
COSMOSIL SL-II offers sharper peak compared with packing materials for medium-pressure liquid chromatography and open chromatography.

#### Comparison with Medium-Pressure Columns

Column: 5SL-II (20 mm I.D. × 250 mm) Pressure: 1.3 MPa  
 Column: Company I cartridge (30 m silica gel) Pressure: 0.25 MPa  
 Column: Company I cartridge (60 m silicagel) Pressure: 0.15 MPa

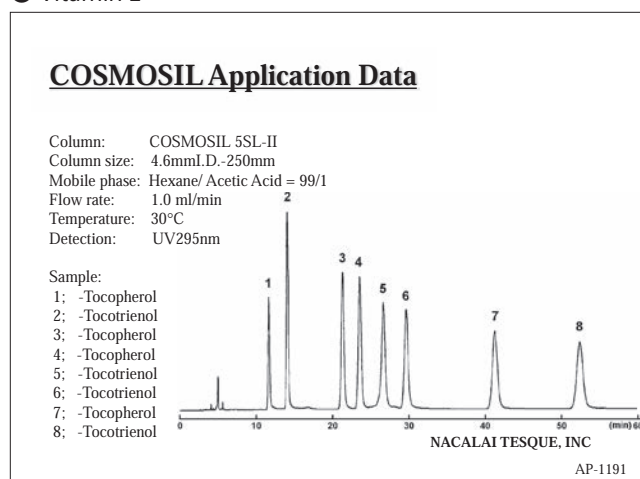
Mobile phase: Ethanol/Hexane = 5/95  
 Flow rate: 10 ml/min  
 Temperature: room temperature  
 Detection: UV254nm

Sample: 1; p-Xylene (8.3mg)  
 2; Cinnamyl Alcohol (1.7mg)  
 3; p-Nitrobenzyl Alcohol (4.2mg)

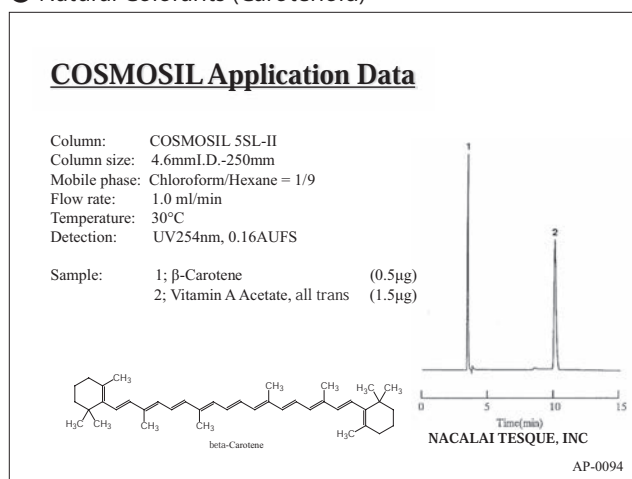


## Applications

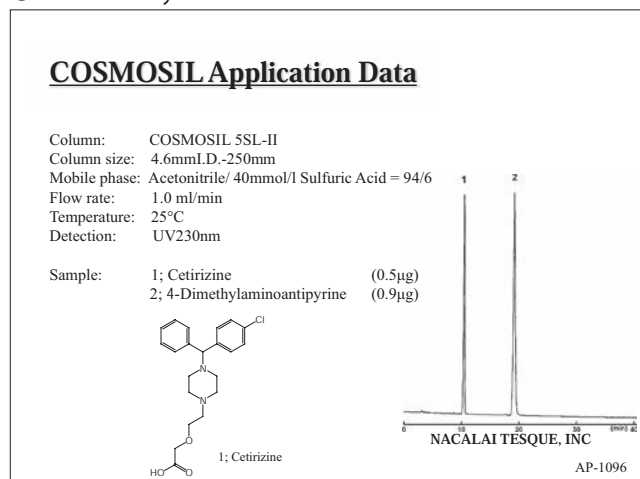
### ● Vitamin E



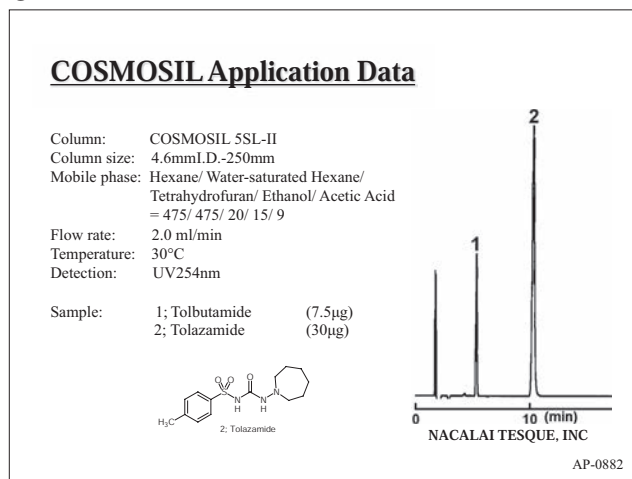
### ● Natural Colorants (Carotenoid)



### ● Cetirizine Hydrochloride



### ● Tolazamide



## Ordering Information

### ● COSMOSIL 5SL-II Analytical / Preparative Columns (Particle Size: 5 $\mu$ m)

#### Packed Column

I.D. x Length (mm)	Product Number
4.6 $\times$ 50	37999-81
4.6 $\times$ 100	38000-01
4.6 $\times$ 150	38001-91
4.6 $\times$ 250	38002-81

I.D. x Length (mm)	Product Number
6.0 $\times$ 150	38003-71
6.0 $\times$ 250	38004-61
10 $\times$ 250	38005-51
20 $\times$ 250	38006-41
28 $\times$ 250	34358-61

#### Guard Column

I.D. x Length (mm)	Product Number
4.6 $\times$ 10	37997-01
10 $\times$ 20	37998-91
20 $\times$ 20	05874-91
20 $\times$ 50	05875-81
28 $\times$ 50	34359-51

### ● COSMOSIL 15SL-II Preparative Columns (Particle Size: 15 $\mu$ m)

#### Packed Column

I.D. x Length (mm)	Product Number
28 $\times$ 250	05893-41
50 $\times$ 250	05895-21
50 $\times$ 500	05896-11

#### Guard Column

I.D. x Length (mm)	Product Number
28 $\times$ 50	05892-51
50 $\times$ 50	05894-31

### ● COSMOSIL 3SL-II Fast LC Columns (Particle Size: 3 $\mu$ m)

#### Packed Column

I.D. x Length (mm)	Product Number
2.0 $\times$ 150	18282-41
4.6 $\times$ 10	38059-61
4.6 $\times$ 50	38060-21

I.D. x Length (mm)	Product Number
4.6 $\times$ 100	38061-11
4.6 $\times$ 150	02266-51
4.6 $\times$ 250	19400-51