



COSMOSIL

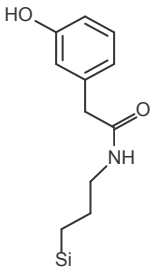
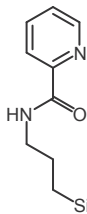
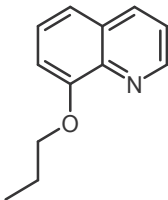
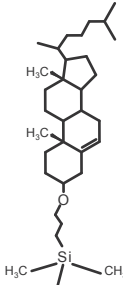
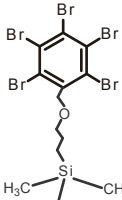
# COSMOSIL SFC Columns

Supercritical Fluid Chromatography (SFC) has become more attractive because it offers some advantages over HPLC, such as high speed, unique selectivity and environmentally friendly separations. Many conventional normal-phase stationary phases, such as diol, amino and cyano, have been used for SFC applications. However, these phases present limitations for separations. COSMOSIL SFC Columns have been developed to enhance the capability of SFC separations.



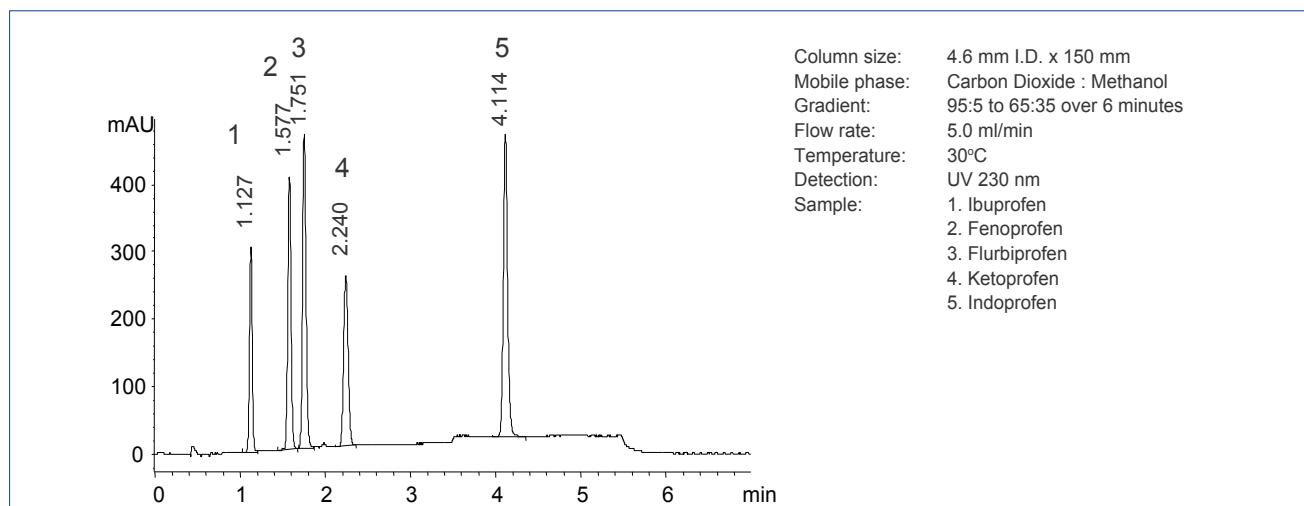
## COSMOSIL SFC Columns

Nacalai Tesque has developed columns specially designed for SFC in collaboration with Nacalai USA and Pfizer, Inc. Global R&D: COSMOSIL HP, PY (equivalent to 2-ethylpyridine) and Quinoline. In addition to these, our HPLC columns Cholester and PBr have been tested for use with SFC.

| Packing Material | HP  | PY  | Quinoline  | Cholester  | PBr   |
|------------------|---|---|--|--|---|
| Particle Sizes   | 3, 5 $\mu\text{m}$  |   | 2.5, 5 $\mu\text{m}$   |  | 5 $\mu\text{m}$   |
| Pore Sizes       | 120 $\text{\AA}$  |   |  |  |   |
| Surface Area     | 300 $\text{m}^2/\text{g}$   |   |  |  |   |
| Structure        |  |  |  |  |  |
| Stationary Phase | 3-Hydroxyphenyl group   | Pyridinyl group   | Quinoline group  | Cholesteryl group  | Pentabromobenzyl group  |

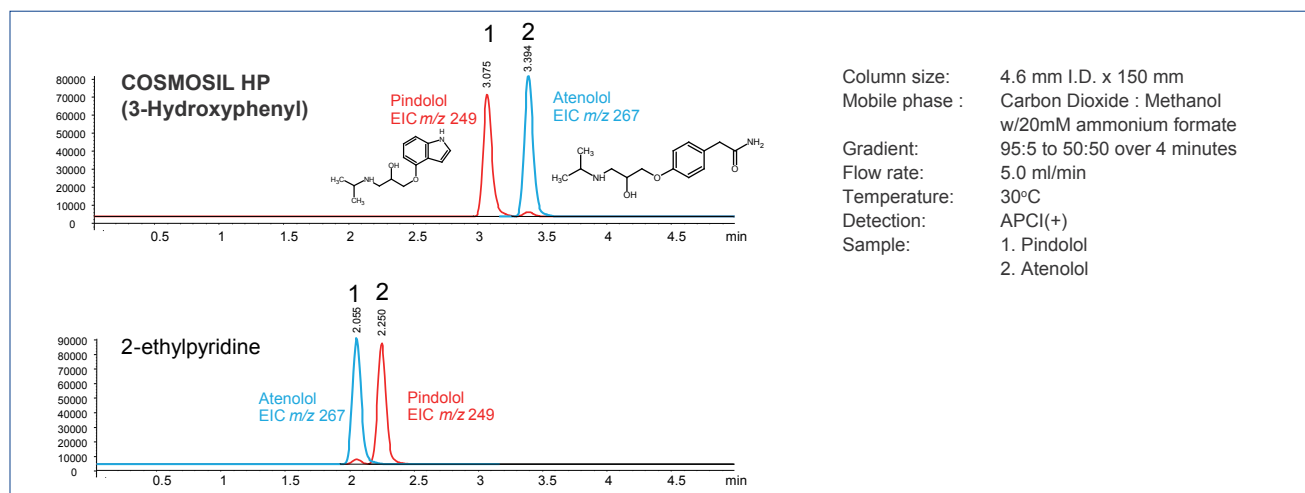
## COSMOSIL HP(3-Hydroxyphenyl)

### Application Data: Non-steroidal anti-inflammatory drugs



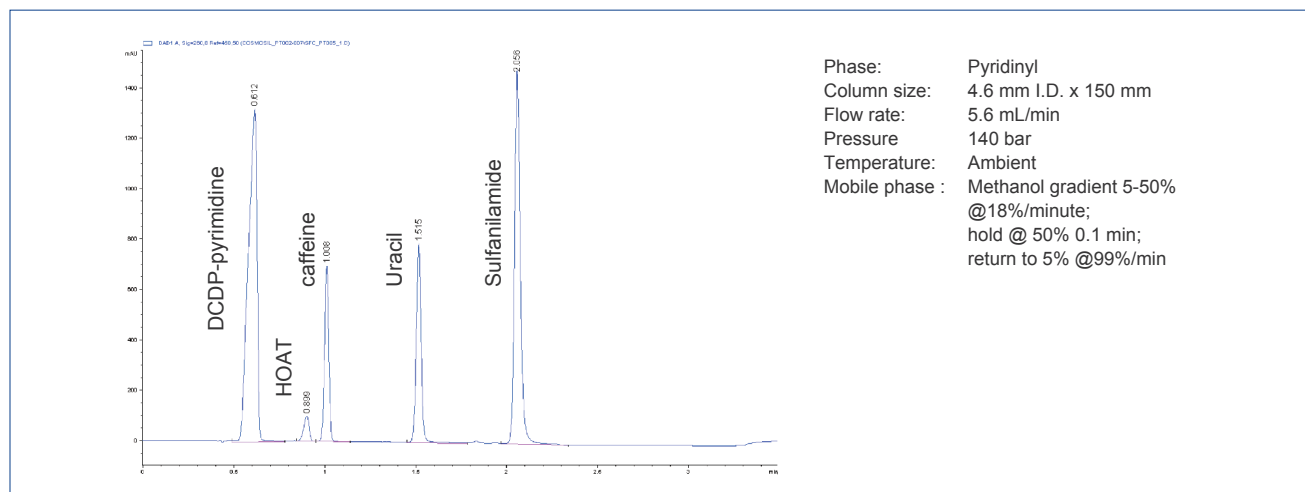
## Application Data: Beta Blockers

### Peak elution order reversal under identical conditions



## COSMOSIL PY (Pyridinyl)

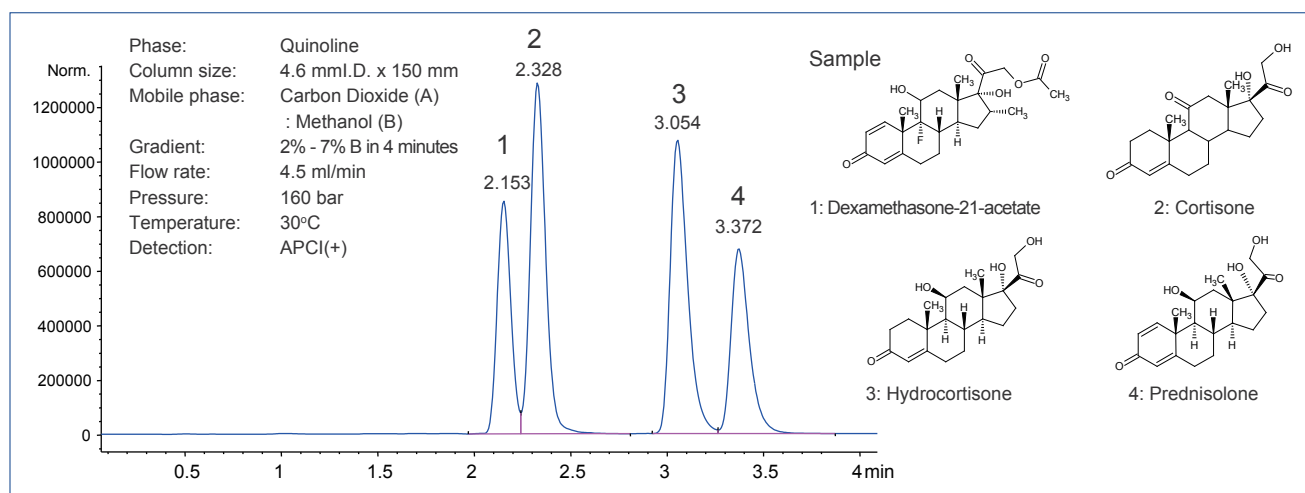
### Application Data: Hydrophilic organics



## COSMOSIL Quinoline

The structural similarities between polar lipids, such as cholesterol and related analogs, have posed chromatographic and spectrometric challenges to analysts interested in quantifying these potential biomarkers. COSMOSIL Quinoline has been developed to improve the separation of these structural isomers utilizing the  $\pi$ - $\pi$  interactions and structural rigidity of the naphthylethyl phase and the hydrogen bonding of the pyridine phase.

### Application Data: Steroids





## Ordering Information

### COSMOSIL HP (3-Hydroxyphenyl)

| Product Name         | Column Size (mm I.D. x mm) | Product No. |
|----------------------|----------------------------|-------------|
| Packed Column (5 µm) | 2.0 x 150                  | 13787-91    |
|                      | 4.6 x 250                  | 13788-81    |
|                      | 10.0 x 250                 | 13789-71    |
|                      | 20.0 x 250                 | 13790-31    |
| Guard Column (5 µm)  | 10.0 x 20                  | 13791-21    |
| Packed Column (3 µm) | 2.0 x 150                  | 13792-11    |
|                      | 4.6 x 250                  | 13793-01    |

### COSMOSIL PY (Pyridinyl)

| Product Name         | Column Size (mm I.D. x mm) | Product No. |
|----------------------|----------------------------|-------------|
| Packed Column (5 µm) | 2.0 x 150                  | 13818-81    |
|                      | 4.6 x 250                  | 13827-61    |
|                      | 10.0 x 250                 | 13828-51    |
|                      | 20.0 x 250                 | 13829-41    |
| Guard Column (5 µm)  | 10.0 x 20                  | 13830-01    |
| Packed Column (3 µm) | 2.0 x 150                  | 13831-91    |
|                      | 4.6 x 250                  | 13832-81    |

### COSMOSIL Quinoline

| Product Name           | Column Size (mm I.D. x mm) | Product No. |
|------------------------|----------------------------|-------------|
| Packed Column (5 µm)   | 2.0 x 150                  | Inquire     |
|                        | 4.6 x 100                  | Inquire     |
|                        | 4.6 x 150                  | Inquire     |
|                        | 10.0 x 150                 | Inquire     |
|                        | 20.0 x 150                 | Inquire     |
| Packed Column (2.5 µm) | 3.0 x 50                   | Inquire     |
|                        | 3.0 x 100                  | Inquire     |
|                        | 3.0 x 150                  | Inquire     |

### COSMOSIL Cholester

| Product Name         | Column Size (mm I.D. x mm) | Product No. |
|----------------------|----------------------------|-------------|
| Packed Column (5 µm) | 4.6 x 150                  | 05976-61    |
|                      | 4.6 x 250                  | 05977-51    |
|                      | 10.0 x 250                 | 05979-31    |
|                      | 20.0 x 250                 | 05982-71    |

### COSMOSIL PBr

| Product Name         | Column Size (mm I.D. x mm) | Product No. |
|----------------------|----------------------------|-------------|
| Packed Column (5 µm) | 4.6 x 150                  | 12394-61    |
|                      | 4.6 x 250                  | 12395-51    |
|                      | 10.0 x 250                 | 12397-31    |
|                      | 20.0 x 250                 | 12398-21    |

Other sizes may be available. Please inquire.

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



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