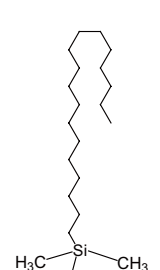
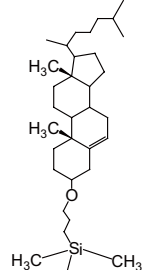
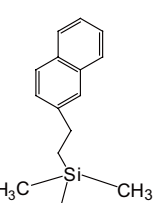
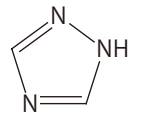
**COSMOSIL**

COSMOSIL Ultra-High Performance Columns

- **Ultra-High Performance Columns with 2.5 µm particles**
- **Can be used with any conventional LC systems**

| Packing Material | 2.5C ₁₈ -MS-II | 2.5Cholester | 2.5πNAP | 2.5πHILIC |
|-----------------------|---|---|--|--|
| Silica Gel | High Purity Porous Spherical Silica | | | |
| Average Particle Size | 2.5 µm | | | |
| Average Pore Size | approx. 130 Å | | | |
| Specific Surface Area | approx. 330 m ² /g | | | |
| Stationary Phase |  Octadecyl Group |  Cholesteryl Group |  Naphtylethyl Group |  Triazole |
| Bonding Type | Monomeric | | | |
| Main Interaction | Hydrophobic Interaction | Hydrophobic Interaction Molecular Shape Selectivity | Hydrophobic Interaction π-π Interaction | Hydrophilic Interaction Anion Exchange |
| End Capping Treatment | Near-perfect Treatment | | | |
| Features | - Monomeric C ₁₈ phase for multi-purpose separations - Suitable for basic compounds | - Usable under the same condition as C ₁₈ columns - High molecular shape selectivity | - Stronger π-π interaction than Phenyl columns | - Suitable for non-retaining by C ₁₈ |

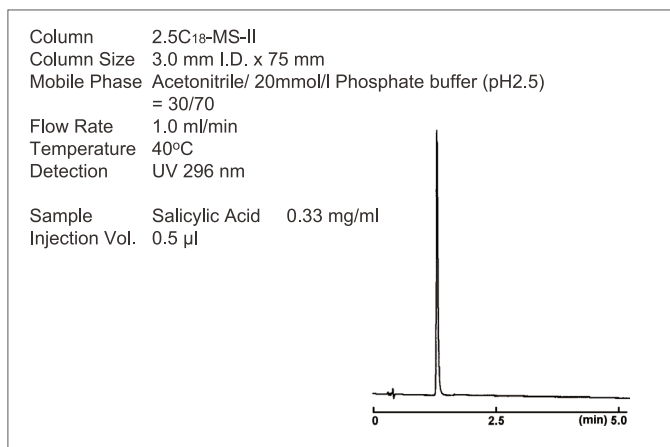
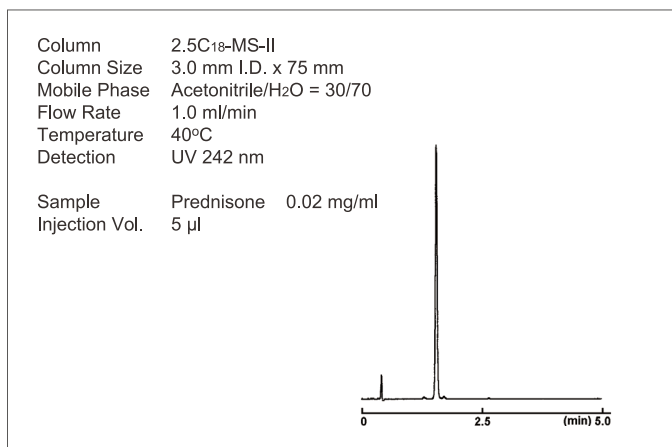
COSMOSIL 2.5C₁₈-MS-II

- **Monomeric C₁₈ phase for multi-purpose separations**
- **Low back pressure**

Applications

COSMOSIL 2.5C₁₈-MS-II (3.0 mm I.D. x 75 mm) enables the separation in 2 minutes.

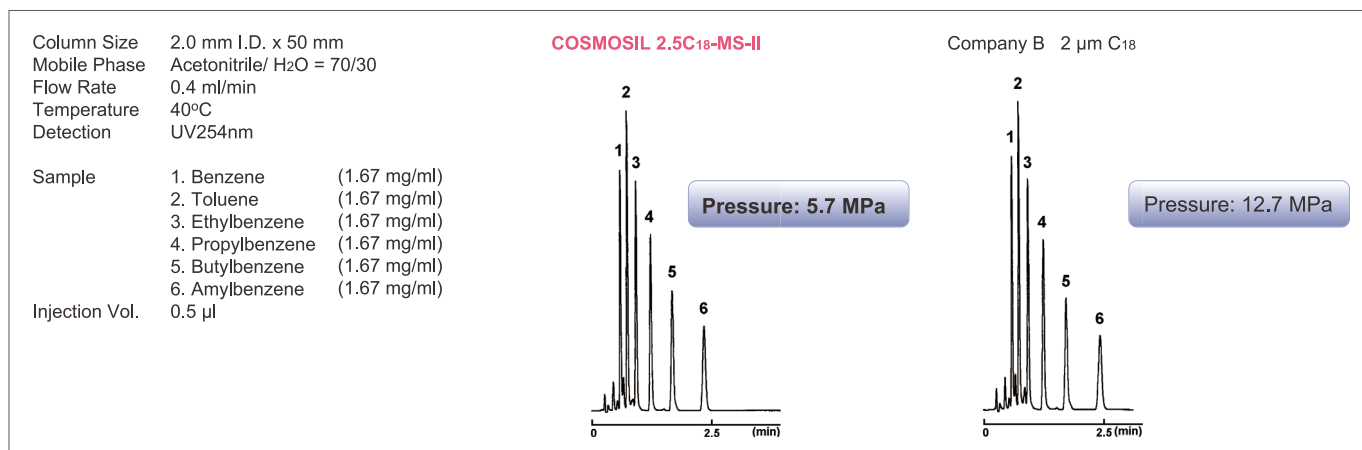
• Prednisone and Salicylic Acid



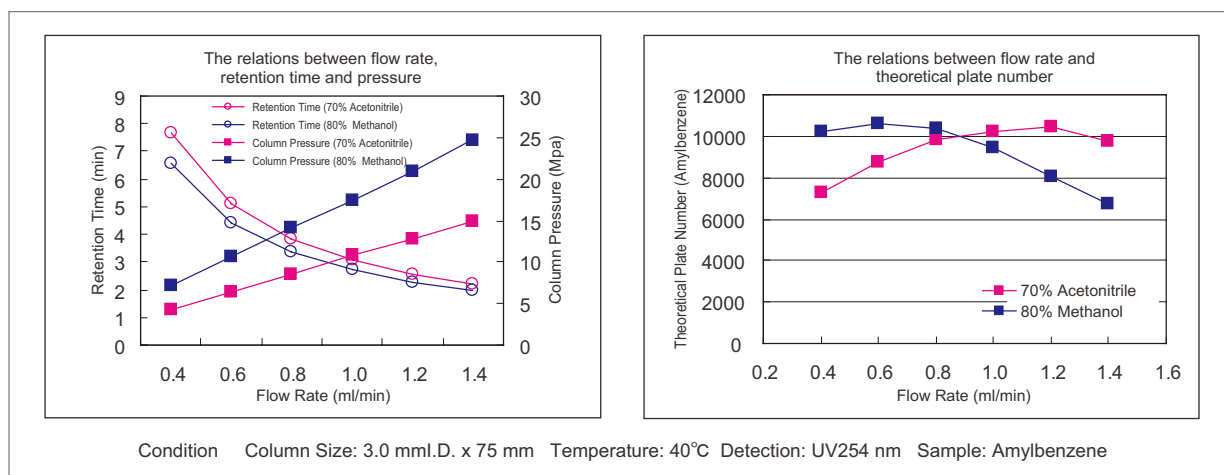
Pressure comparison with competitors' 2 µm columns

COSMOSIL 2.5C18-MS-II can be used under 1/2 pressure of competitors' 2 µm columns.

• 2.0 mm I.D. x 50 mm



The relations between flow rate, retention time, pressure and theoretical plate number

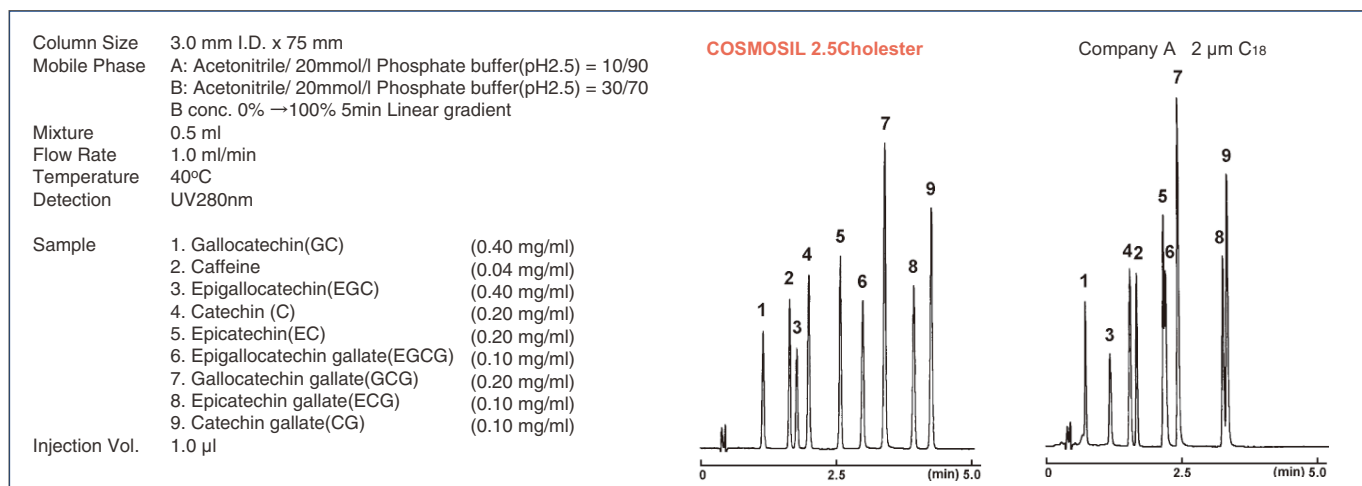


COSMOSIL 2.5Cholester

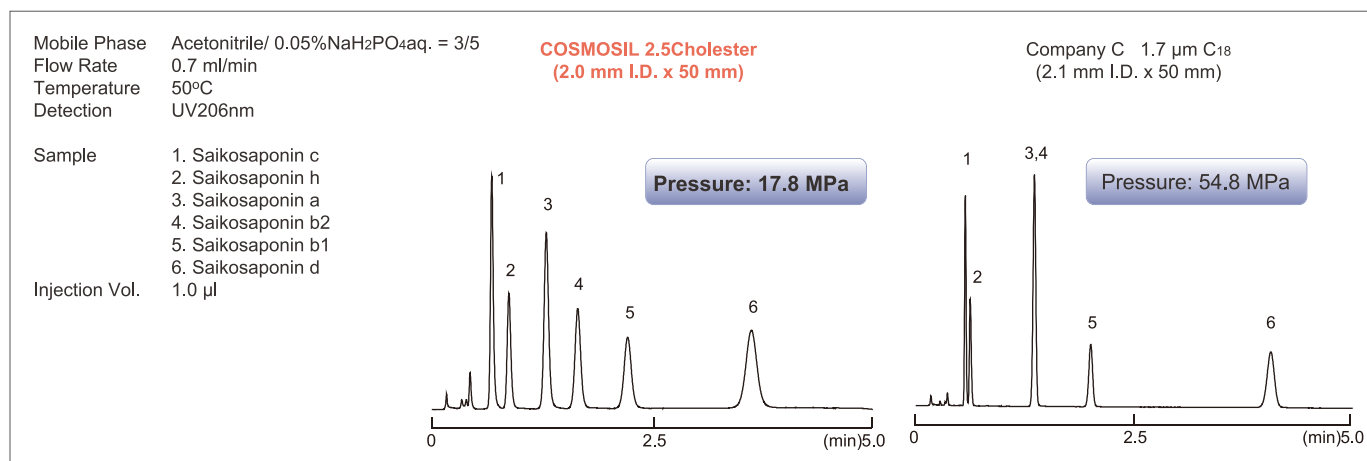
- **Cholesterol bonded stationary phase**
- **Excellent molecular shape selectivity**
- **Low back pressure**

Improved Separation

COSMOSIL 2.5Cholester offers improved resolution for compounds difficult to analyze with C₁₈ without changing analytical condition.



• Saikosaponins



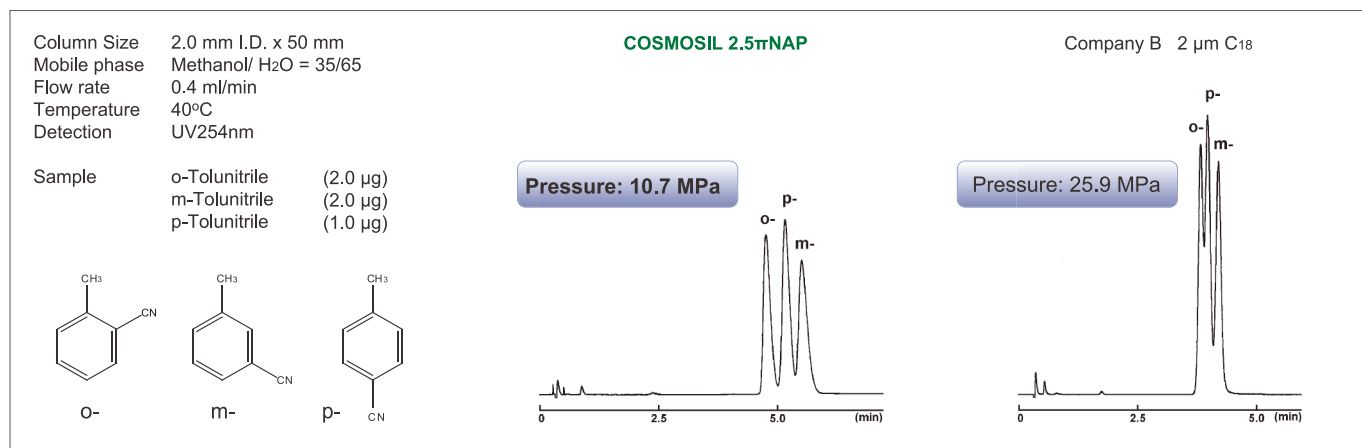
COSMOSIL 2.5πNAP

- **Naphthalene bonded stationary phase**
- **Stronger π-π interactions than Phenyl columns**
- **Low back pressure**

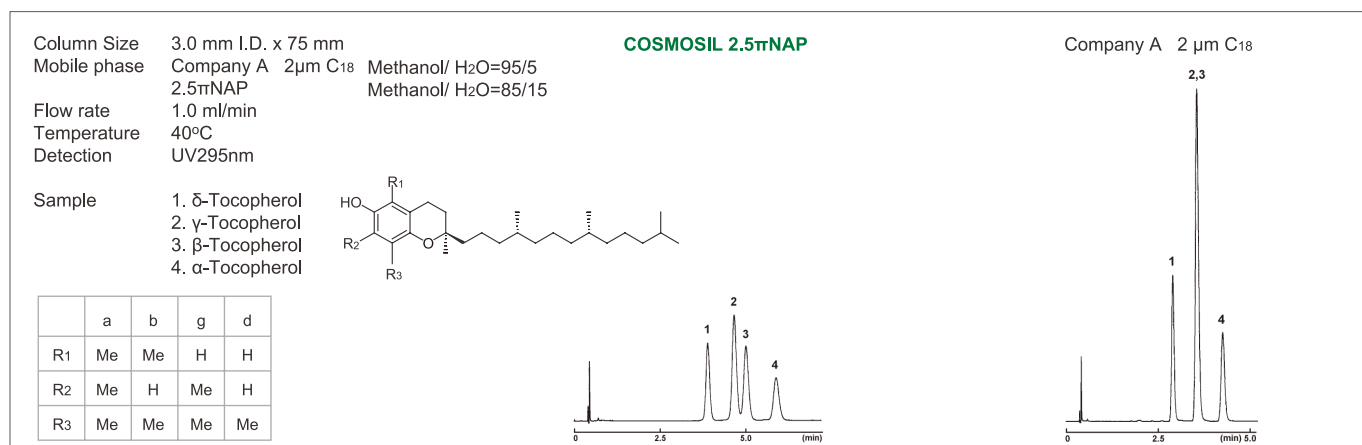
Improved Separation

COSMOSIL 2.5πNAP provides greater performance in separating positional isomers and other closely related compounds which are difficult to analyze with C₁₈.

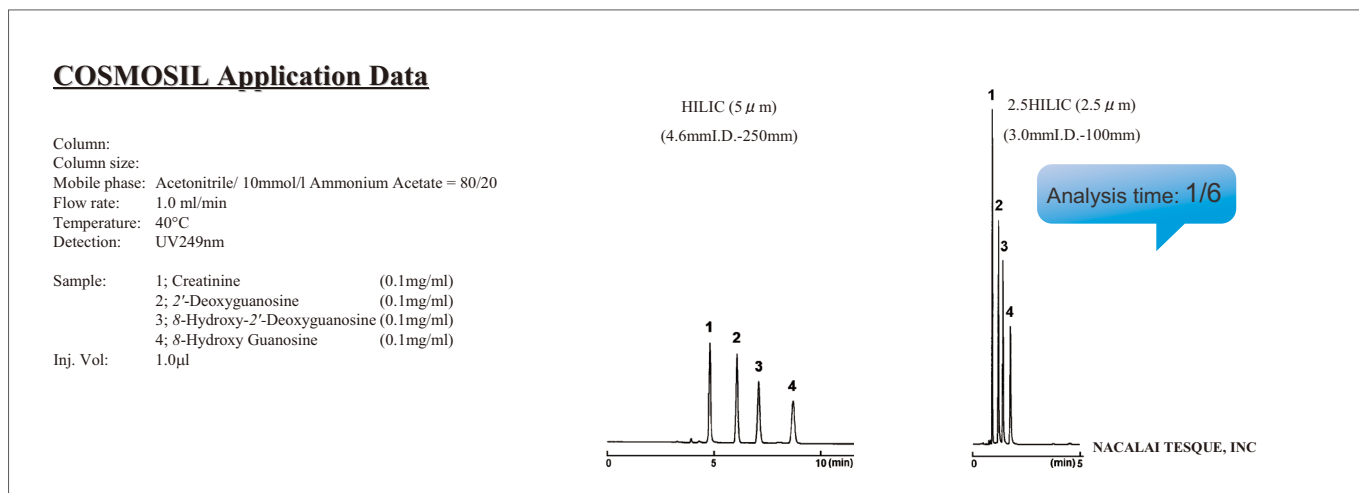
• Tolunitriles (Positional Isomers)



• Tocopherols (Positional Isomers)

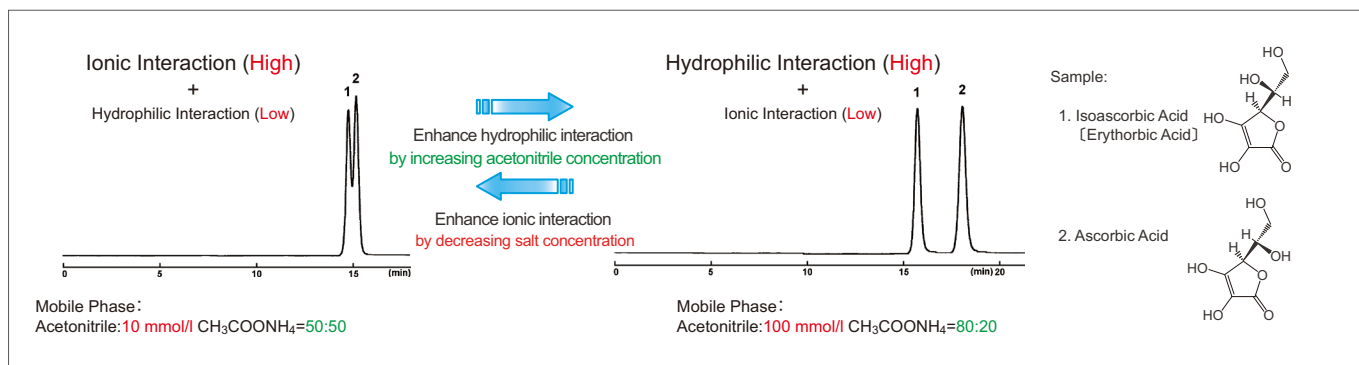


- **Triazole bonded stationary phase**
- **Alternative selectivity to other HILIC columns**
- **Ultra-High-Speed Analysis (Oxidation marker analysis)**



Two interactions (hydrophilic interaction and anion exchange capacity)

The retention mechanism of COSMOSIL HILIC is the combination of hydrophilic interaction and anion-exchange, and the retention can be controlled by changing the mobile phase. More specifically, the hydrophilic interaction can be enhanced by increasing the organic solvent concentration while suppressing the ionic interaction with high salt concentration.



Ordering Information

| Column Size | 2.5C ₁₈ -MS-II Product Number | 2.5Cholester Product Number | 2.5π-NAP Product Number | 2.5HILIC Product Number |
|----------------------|---|--------------------------------|----------------------------|----------------------------|
| 2.0 mm I.D. x 50 mm | 08994-31 | 09000-01 | 06062-91 | 11766-21 |
| 2.0 mm I.D. x 75 mm | 08995-21 | 09047-11 | 06051-31 | 11768-01 |
| 2.0 mm I.D. x 100 mm | 08996-11 | 09048-01 | 06052-21 | 11769-91 |
| 2.0 mm I.D. x 150 mm | - | - | - | 11770-51 |
| 3.0 mm I.D. x 50 mm | 08997-01 | 09049-91 | 06054-01 | 11771-41 |
| 3.0 mm I.D. x 75 mm | 08998-91 | 09050-51 | 06055-91 | 11772-31 |
| 3.0 mm I.D. x 100 mm | 08999-81 | 09051-41 | 06057-71 | 11773-21 |
| 3.0 mm I.D. x 150 mm | - | - | - | 11774-11 |

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