

COSMOSIL PBr / COSMOCORE PBr



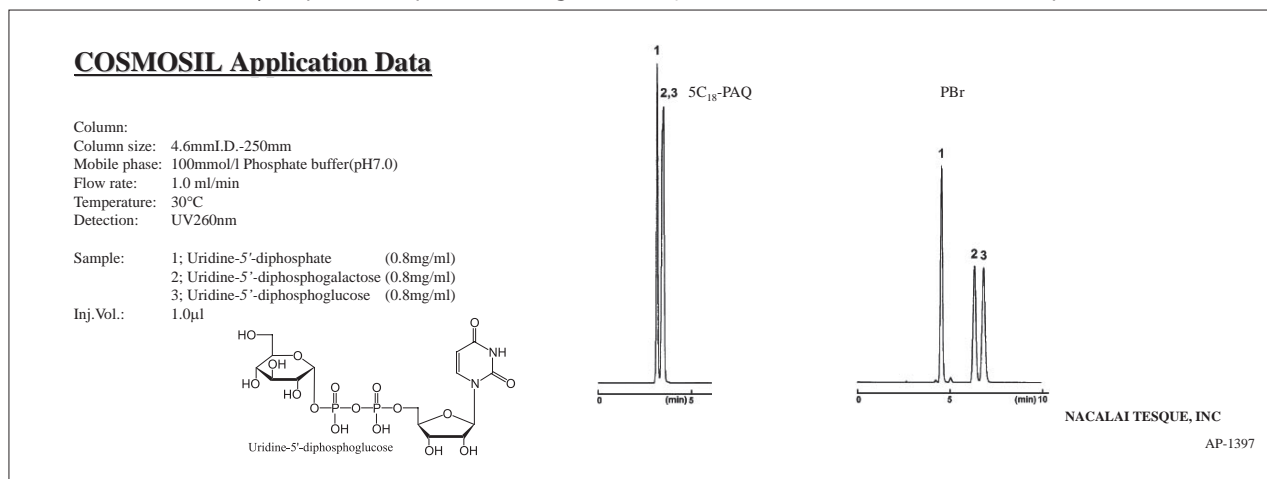
- Pentabromobenzyl-bonded stationary phase
- Separate hydrophilic and hydrophobic compounds in reversed-phase conditions

Suitable Samples

- Hydrophilic compounds
- Nucleotides, peptides, catecholamines and oligosaccharides

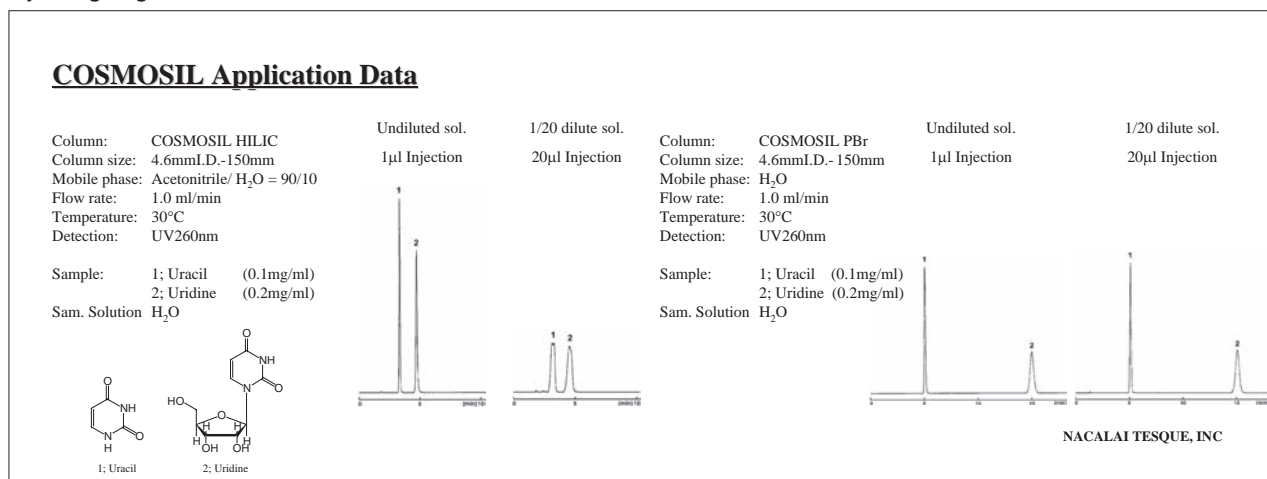
Comparison with C₁₈

COSMOSIL PBr retains hydrophilic compounds stronger than C₁₈ columns under the same reversed-phase conditions.



Comparison with HILIC

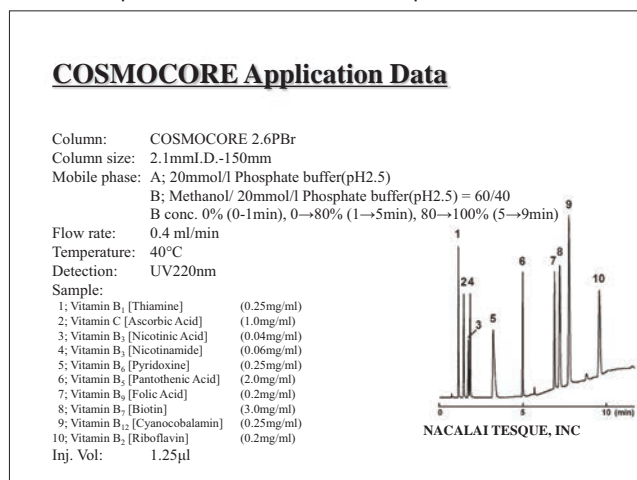
HILIC is widely recognized as a method for separating hydrophilic compounds. However, because it differs from the commonly used reversed-phase mode, setting mobile phase conditions can be difficult. In addition, the use of acetonitrile in high concentration can cause problems with peak shape when using water as a sample solvent. COSMOSIL PBr can retain hydrophilic compounds under reversed-phase conditions, and maintains good peak shape even when injecting large amounts of water.



COSMOCORE 2.6PBr core-shell column

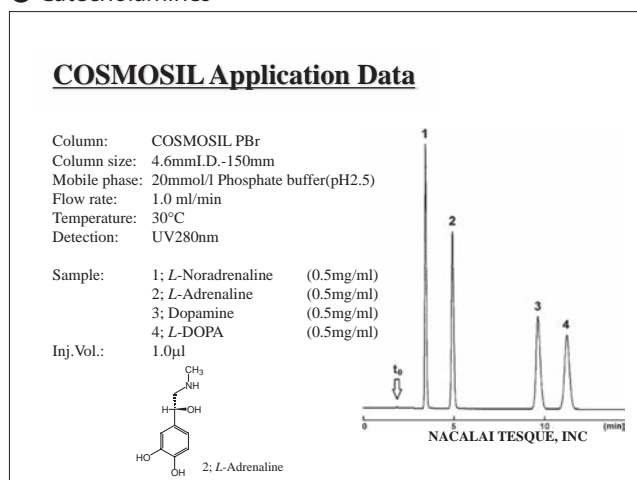
- High-performance separation of water-soluble compounds in reversed-phase mode

Water-soluble compounds can be difficult to separate under reversed-phase conditions, even using C_{18} columns designed for aqueous conditions, due to very low retention. PBr can retain many of these compounds enough to achieve separation, as in the below separation of ten water-soluble vitamins.

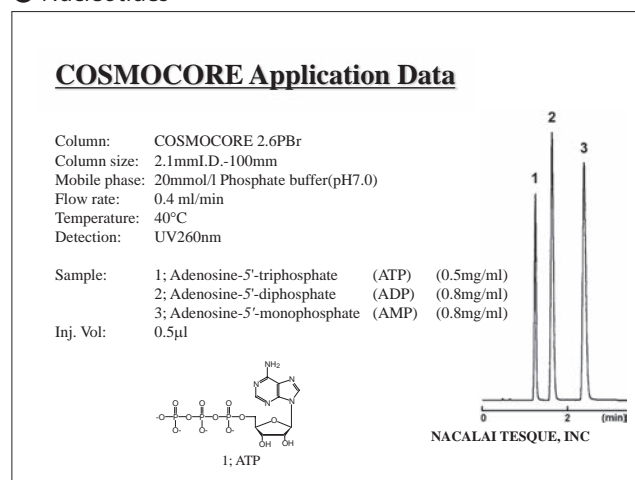


Applications

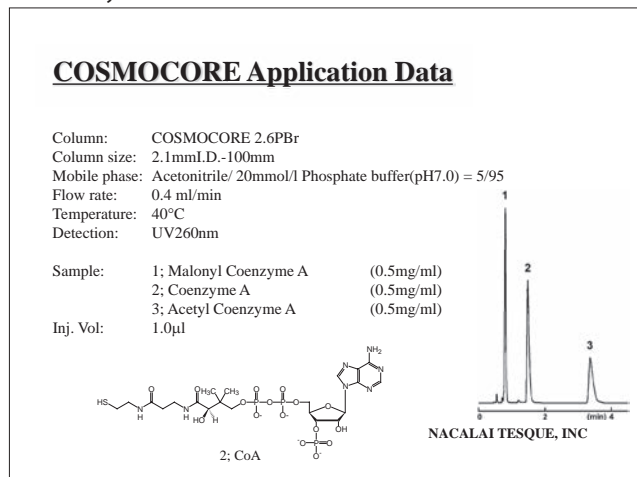
- Catecholamines



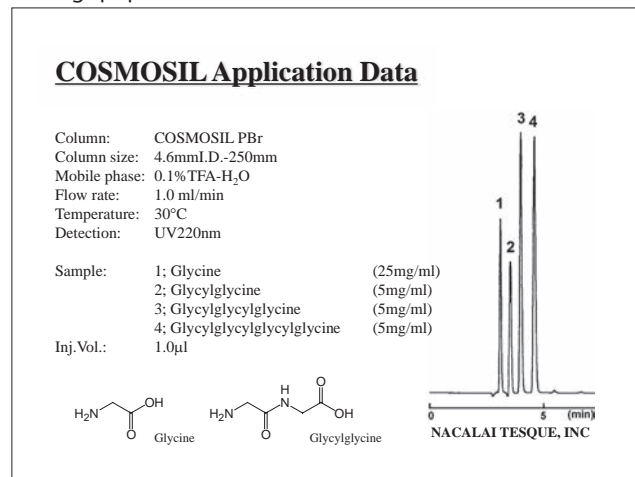
- Nucleotides



- Coenzyme A

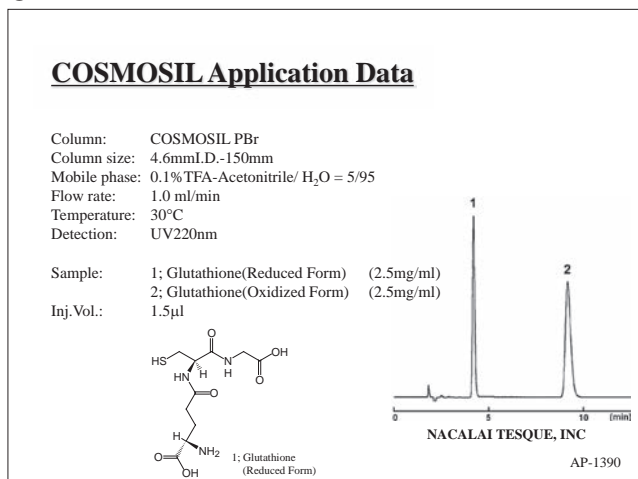


- Oligopeptides

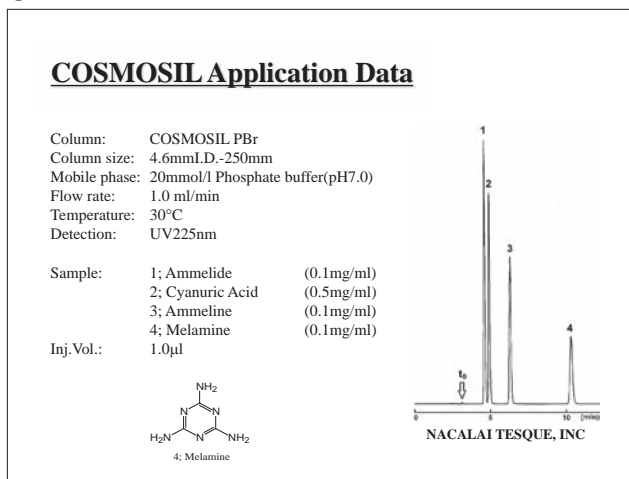


Applications

● Glutathione



● Melamine



Ordering Information

● COSMOSIL PBr Analytical / Preparative Columns (Particle Size: 5 µm)

Packed Column

I.D. x Length (mm)	Product Number	I.D. x Length (mm)	Product Number	I.D. x Length (mm)	Product Number
2.0 × 50	12943-61	4.6 × 150	12394-61	28 × 100	13260-71
2.0 × 100	13245-81	4.6 × 250	12395-51	28 × 150	13261-61
2.0 × 150	12392-81	10 × 50	13253-71	28 × 250	13262-51
2.0 × 250	13247-61	10 × 100	13254-61	Guard Column / Guard Cartridge	
3.0 × 50	12592-61	10 × 150	13255-51	I.D. x Length (mm)	Product Number
3.0 × 100	13249-41	10 × 250	12397-31	2.0 × 10 Cartridge*	18196-94
3.0 × 150	13250-01	20 × 50	13257-31	4.6 × 10 Cartridge*	12444-14
3.0 × 250	13251-91	20 × 100	13258-21	10 × 20	12396-41
4.6 × 50	13252-81	20 × 150	13259-11	20 × 20	13256-41
4.6 × 100	12594-41	20 × 250	12398-21	28 × 50	12653-61

* 2 cartridges included. Guard cartridge holder required; refer to page 78.

● COSMOSIL PBr Fast LC Columns (Particle Size: 3 µm)

Packed Column

I.D. x Length (mm)	Product Number	I.D. x Length (mm)	Product Number	I.D. x Length (mm)	Product Number
2.0 × 50	19345-91	3.0 × 100	19351-01	4.6 × 150	19357-41
2.0 × 75	19346-81	3.0 × 150	19352-91	4.6 × 250	19358-31
2.0 × 100	19347-71	3.0 × 250	19353-81	Guard Cartridge	
2.0 × 150	19078-01	4.6 × 50	19354-71	I.D. x Length (mm)	Product Number
2.0 × 250	19348-61	4.6 × 75	19355-61	2.0 × 10 Cartridge*	19359-34
3.0 × 50	19349-51	4.6 × 100	19356-51	4.6 × 10 Cartridge*	19360-94
3.0 × 75	19350-11			* 2 cartridges included. Guard cartridge holder required; refer to page 78.	

● COSMOCORE 2.6PBr UHPLC Columns (Particle Size: 2.6 µm)

Packed Column

I.D. x Length (mm)	Product Number	I.D. x Length (mm)	Product Number	I.D. x Length (mm)	Product Number
2.1 × 30	13692-21	3.0 × 30	13698-61	4.6 × 30	13705-51
2.1 × 50	13693-11	3.0 × 50	13699-51	4.6 × 50	13712-51
2.1 × 75	13694-01	3.0 × 75	13700-01	4.6 × 75	13714-31
2.1 × 100	13695-91	3.0 × 100	13701-91	4.6 × 100	13715-21
2.1 × 150	13697-71	3.0 × 150	13703-71	4.6 × 150	13719-81
				4.6 × 250	13734-71

COSMOCORE's connector is the same type as Waters UPLC[®] columns.

COSMOSIL PFP



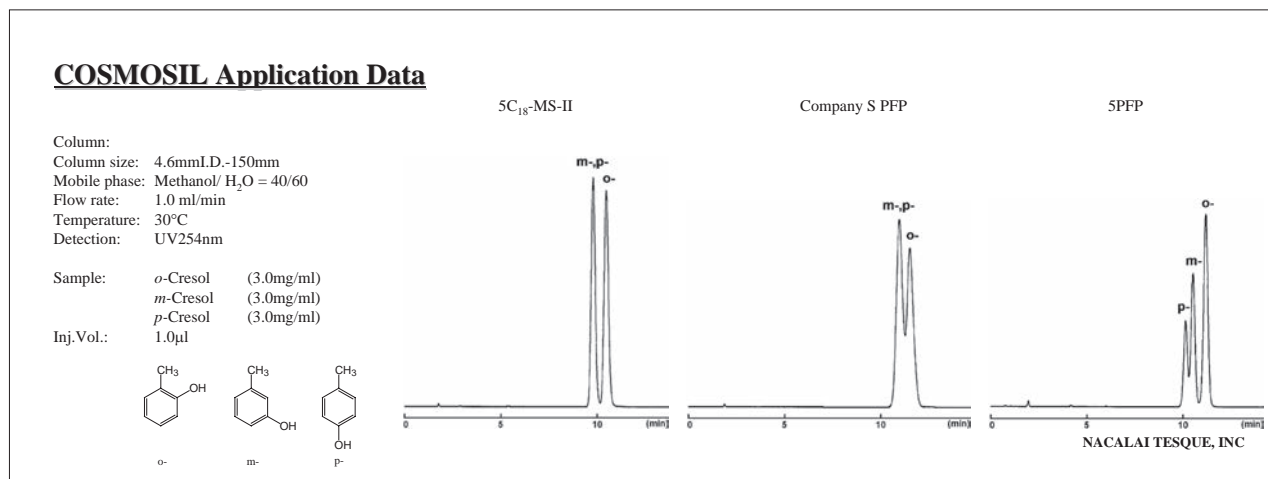
- Pentafluorophenyl-bonded stationary phase
- Alternative selectivity to C₁₈ columns

Suitable Samples

- Vitamin E
- Structural isomers and fluorides

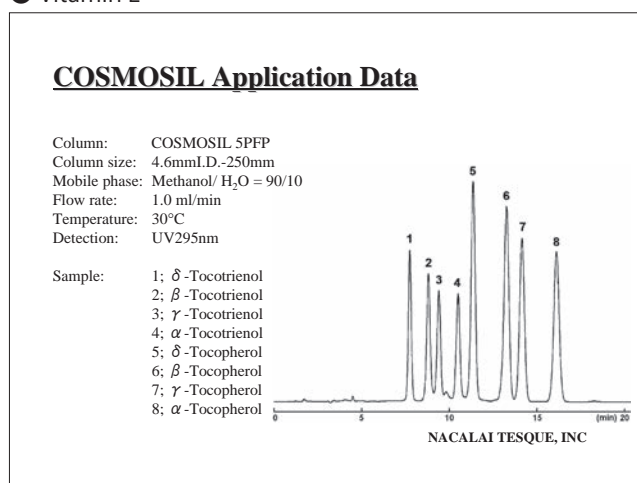
Alternative Selectivity to C₁₈ Columns

COSMOSIL PFP provides different selectivity from C₁₈ columns. Furthermore, it offers improved separation compared to other PFP columns.

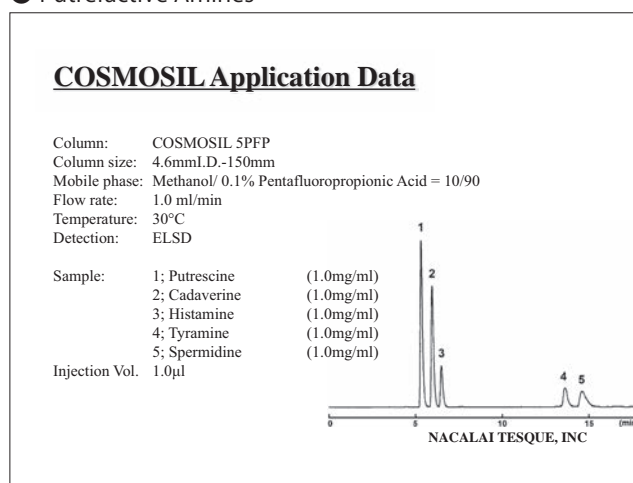


Applications

● Vitamin E



● Putrefactive Amines



Ordering Information

● COSMOSIL PFP Analytical / Preparative Columns (Particle Size: 5 µm)

Packed Column

I.D. x Length (mm)	Product Number	I.D. x Length (mm)	Product Number	I.D. x Length (mm)	Product Number
2.0 × 50	13263-41	4.6 × 150	12383-01	28 × 100	13280-11
2.0 × 100	13264-31	4.6 × 250	12384-91	28 × 150	13281-01
2.0 × 150	12381-21	10 × 50	13272-21	28 × 250	13282-91
2.0 × 250	13265-21	10 × 100	13273-11	Guard Column / Guard Cartridge	
3.0 × 50	13266-11	10 × 150	13274-01	I.D. x Length (mm)	Product Number
3.0 × 100	13267-01	10 × 250	12386-71	4.6 × 10 Cartridge*	12443-24
3.0 × 150	13268-91	20 × 50	13276-81	10 × 20	12385-81
3.0 × 250	13269-81	20 × 100	13277-71	20 × 20	13275-91
4.6 × 50	13270-41	20 × 150	13278-61	28 × 50	13279-51
4.6 × 100	13271-31	20 × 250	12387-61	* 2 cartridges included. Guard cartridge holder required; refer to page 78.	

COSMOSIL π NAP

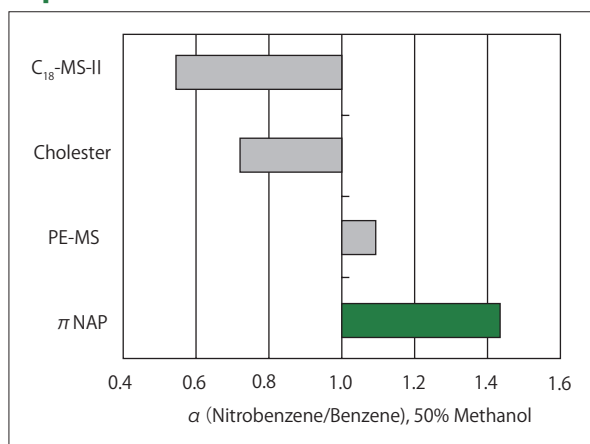


- Naphthalene-bonded stationary phase
- Enhanced π - π interactions

Suitable Samples

- Aromatic compounds and positional isomers

Comparison of π - π Interactions

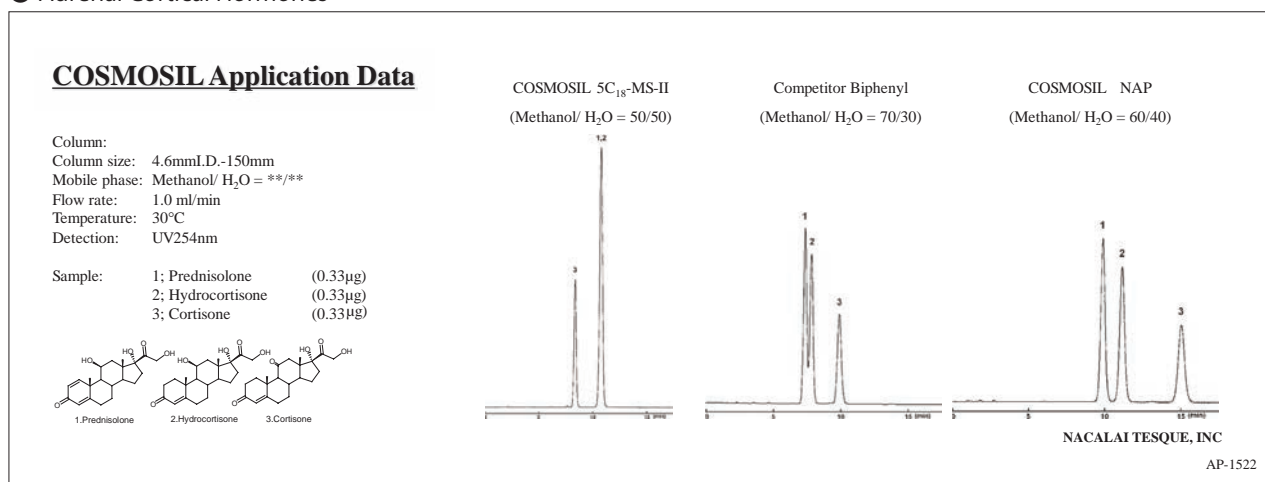


COSMOSIL π NAP shows stronger π - π interactions than phenyl columns. Its two fused aromatic rings retain nitrobenzene with more π electrons stronger than phenyl columns.

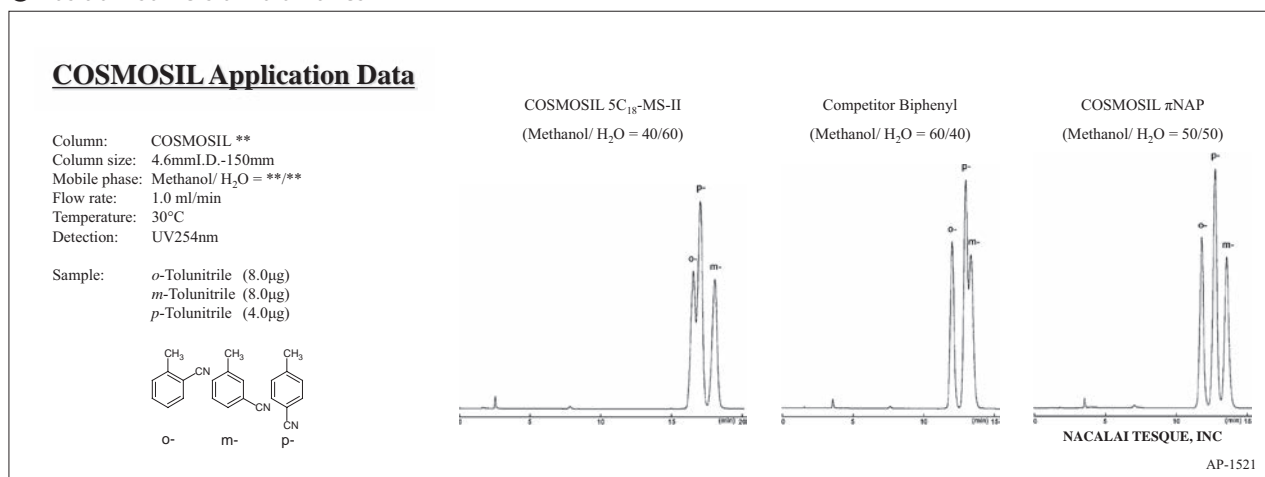
Figure. Comparison of π - π Interactions

Comparison with C₁₈ and Phenyl Columns

- Adrenal Cortical Hormones

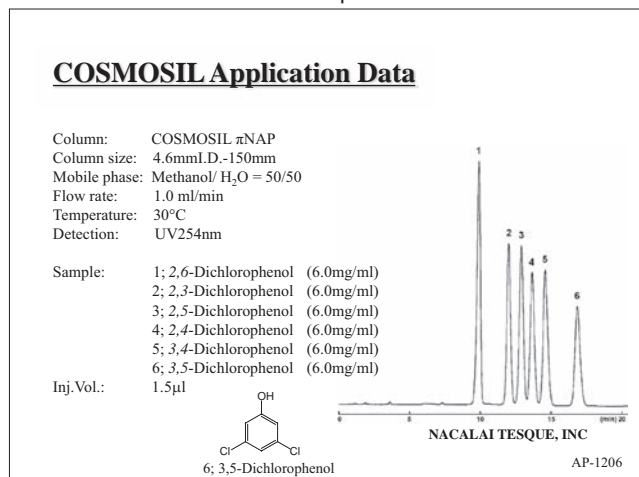


- Position Isomers of Tolunitriles

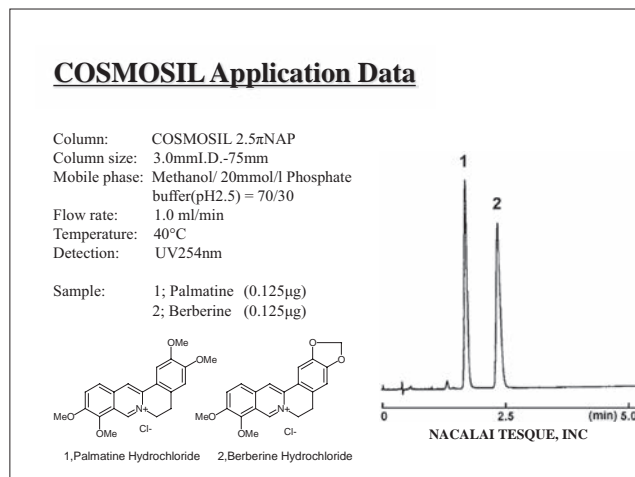


Applications

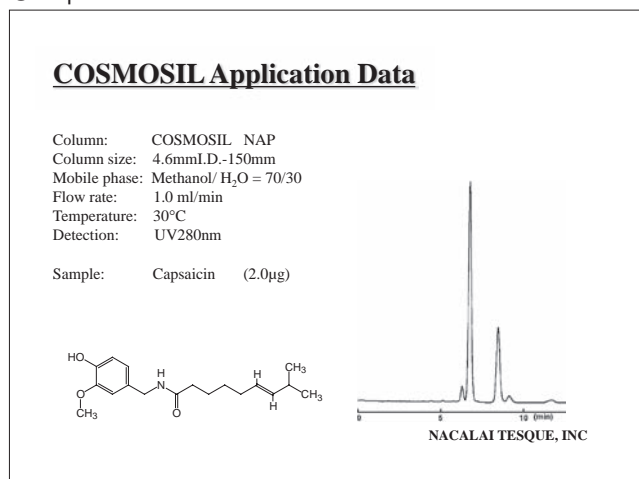
● Position Isomers of Dichlorophenols



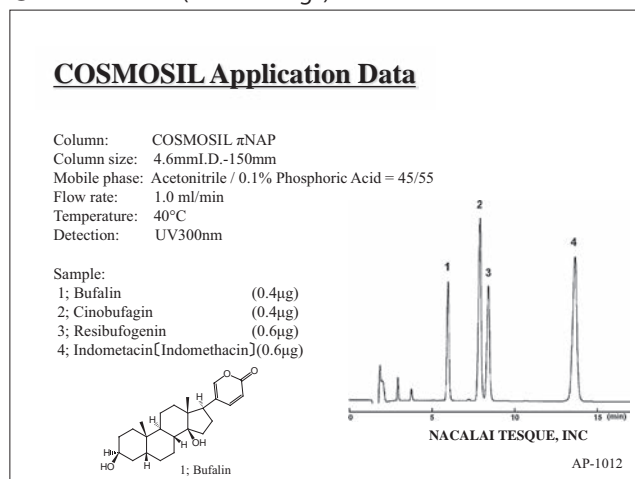
● Berberines



● Capsaicin



● Toad Venom (Crude Drugs)



Ordering Information

● COSMOSIL π NAP Analytical / Preparative Columns (Particle Size: 5 μ m)

Packed Column

I.D. x Length (mm)	Product Number
1.0 x 150	08076-61
1.0 x 250	08077-51
2.0 x 30	08566-41
2.0 x 50	08567-31
2.0 x 100	08299-51
2.0 x 150	08078-41
2.0 x 250	08079-31
3.0 x 150	08080-91
3.0 x 250	08081-81
4.6 x 50	08083-61

I.D. x Length (mm)	Product Number
4.6 x 100	08084-51
4.6 x 150	08085-41
4.6 x 250	08086-31
10 x 50	16594-21
10 x 100	16595-11
10 x 150	08088-11
10 x 250	08089-01
20 x 50	08091-51
20 x 100	16596-01
20 x 150	08092-41

I.D. x Length (mm)	Product Number
20 x 250	08093-31
28 x 100	12563-41
28 x 150	16597-91
28 x 250	08095-11

Guard Column

I.D. x Length (mm)	Product Number
4.6 x 10	08082-71
10 x 20	08087-21
20 x 20	08090-61
28 x 50	08094-21

● COSMOSIL π NAP Fast LC Columns (Particle Size: 3 μ m)

Packed Column

I.D. x Length (mm)	Product Number
2.0 x 50	21495-61
2.0 x 75	21496-51
2.0 x 100	21497-41
2.0 x 150	21499-21
2.0 x 250	21500-71
3.0 x 50	21509-81

I.D. x Length (mm)	Product Number
3.0 x 75	21513-11
3.0 x 100	21514-01
3.0 x 150	21520-11
3.0 x 250	21521-01
4.6 x 50	21522-91
4.6 x 75	21523-81

I.D. x Length (mm)	Product Number
4.6 x 100	21524-71
4.6 x 150	21525-61
4.6 x 250	21526-51

Guard Cartridge

I.D. x Length (mm)	Product Number
4.6 x 10 Cartridge*	21527-54

* 2 cartridges included. Guard cartridge holder required; refer to page 78.

● COSMOSIL 2.5 π NAP Fast LC columns (Particle Size: 2.5 μ m)

Packed Column

I.D. x Length (mm)	Product Number
2.0 x 50	06062-91
2.0 x 75	06051-31

I.D. x Length (mm)	Product Number
2.0 x 100	06052-21
3.0 x 50	06054-01

I.D. x Length (mm)	Product Number
3.0 x 75	06055-91
3.0 x 100	06057-71