

◆ Reversed Phase Chromatography Octadecyl Types COSMOSIL MS-II, AR-II, PAQ

COSMOSIL 5C18-MS-II is a monomeric type of C18 phase. A new end capping treatment with polar groups of "shield effect" has extended the pH range and significantly improved peak shape for basic compounds. This phase is recommended for most of application but particularly effective for low molecular weight organic compounds.

COSMOSIL 5C18-AR-II is a polymeric type of C18 phase. It shows exceptional stability and long lifetime at low pH. This phase is recommended for the separations requiring acidic mobile phase conditions. It also shows superior molecular shape selectivity to monomeric type C18 columns.

COSMOSIL 5C18-PAQ is designed to offer superior retention of polar compounds and excellent reproducibility in highly aqueous mobile phases, even in 100% aqueous.



◆ HPLC column for Saccharide Analysis COSMOSIL Sugar-D

Conventionally aminopropyl bonded stationary phases are used for liquid chromatographic analysis of mono and oligosaccharides. General shortcomings of the conventional aminopropyl bonded phases are tailing and adsorption of certain saccharides and general low durability (short active life) of these columns. These problems are addressed and solved by the novel COSMOSIL Sugar-D, resulting in better (sharper) separation and much improved durability.

In addition COSMOSIL Sugar-D is useful at the separation of highly hydrophilic compounds which are not retained in conventional octadecyl (ODS) bonded stationary phases.

- ◆ *Novel stationary phase for saccharides*
- ◆ *Superior durability to conventional amino columns*
- ◆ *Minimized undesirable adsorption*



◆ Wide Pore HPLC Column for Protein Chemistry COSMOSIL Protein-R

COSMOSIL Protein-R is a reversed phase HPLC column designed specifically for protein and peptide separation. COSMOSIL C Protein-R provides significantly improved peak shapes, high recovery rate and outstanding stability at low pH, which are often problematic for the separation of proteins and peptides with conventional C18-300 A and C4-300 A columns.

- ◆ *Excellent Separation*
- ◆ *High recovery rate*
- ◆ *Outstanding stability at low pH*



◆ Normal Phase HPLC Column COSMOSIL SL-II

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 carbonyl or phenol hydroxyl groups, which are often problematic to separate using conventional silica gel columns because of interference of metallic impurities. The followings are applications of COSMOSIL SL-II column on organic acids, acid amides and phenols. COSMOSIL SL-II provides improved separation for these compounds without ionic additives by using mobile phases of hexane and ethanol.

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



◆ For Less Solvent Consumption with Standard System COSMOSIL 3.0 mm I.D. columns

COSMOSIL 3.0 mm I.D. columns were developed aiming at high sensitivity and the reduction of solvent requirement. A 3.0 mm I.D. column is about twice as sensitive as a 4.6 mm I.D. column. High performance packing material of the same COSMOSIL series is filled into the 3.0 mm I.D. column. As a result, high reproducibility is achieved for separation of chelating compounds and basic compounds. In addition, there is no change the HPLC system. This is a significant advantage over semi-micro bore columns. By using a mid-core 3.0 mm I.D. column, high sensitivity and economical solvent consumption can be achieved on any conventional HPLC systems.

- ◆ *Use the same conventional HPLC system*
- ◆ *Reduce half solvent consumption*
- ◆ *Increase sensitivity up to two times*

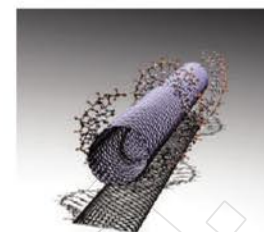


Product Name	Column Size	Product No.	Product Name	Column Size	Product No.
STANDARD REGULAR COLUMN			SPECIAL COLUMN		
COSMOSIL 5C18-MS-II Packed Column	4.6 mm I.D X 150 mm	38019-81	COSMOSIL Cholestol Packed Column	4.6 mm I.D X 150 mm	05976-61
COSMOSIL 5C18-MS-II Packed Column	4.6 mm I.D X 250 mm	38020-41	COSMOSIL Cholestol Packed Column	4.6 mm I.D X 250 mm	05977-51
COSMOSIL 5C18-AR-II Packed Column	4.6 mm I.D X 150 mm	38144-31	COSMOSIL ttNAP Packed Column	4.6 mm I.D X 150 mm	08085-41
COSMOSIL 5C18-AR-II Packed Column	4.6 mm I.D X 250 mm	38145-21	COSMOSIL ttNAP Packed Column	4.6 mm I.D X 250 mm	08086-31
COSMOSIL 5C18-PAQ Packed Column	4.6 mm I.D X 150 mm	02486-71	COSMOSIL HILIC Packed Column	4.6 mm I.D X 150 mm	07056-51
COSMOSIL 5C18-PAQ Packed Column	4.6 mm I.D X 250 mm	02485-81	COSMOSIL HILIC Packed Column	4.6 mm I.D X 250 mm	07057-41
COSMOSIL 5C8-MS Packed Column	4.6 mm I.D X 150 mm	38155-91	COSMOSIL Sugar-D Packed Column	4.6 mm I.D X 150 mm	05395-71
COSMOSIL 5C8-MS Packed Column	4.6 mm I.D X 250 mm	38156-81	COSMOSIL Sugar-D Packed Column	4.6 mm I.D X 250 mm	05397-51
COSMOSIL 5SL-II Packed Column	4.6 mm I.D X 150 mm	38001-91			
COSMOSIL 5SL-II Packed Column	4.6 mm I.D X 250 mm	38002-81			
COSMOSIL 5CN-MS Packed Column	4.6 mm I.D X 150 mm	38235-41			
COSMOSIL 5CN-MS Packed Column	4.6 mm I.D X 250 mm	38236-31			
COSMOSIL 5PE-MS Packed Column	4.6 mm I.D X 150 mm	38185-01			
COSMOSIL 5PE-MS Packed Column	4.6 mm I.D X 250 mm	38186-91			

◆ **HPLC Column for separation of Oluble Carbon Nanotubes COSMOSIL CNT**

COSMOSIL CNT series are ideal for separation of soluble carbon nanotubes based on sizes. COSMOSIL CNT series are packed with hydrophilic group-bonded silica packing material. The columns are specially designed to avoid adsorption of carbon nanotubes to silica support and thus ensure high resolution and maximum recovery of carbon naotubes. COSMOSIL CNT series are available in three different sizes, 300 A, 1000 A and 2000 A, respectively.

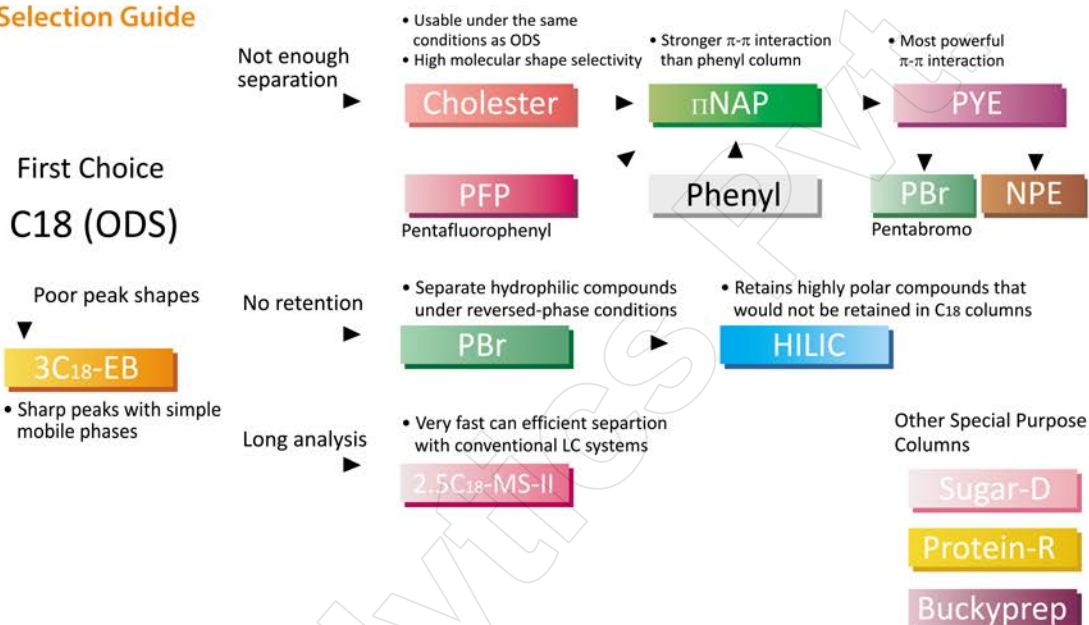
- ◆ Size-based separation of soluble carbon nanotubes
- ◆ Hydrophilic group coating silica packing material
- ◆ Three types of pore size (100A, 1000A, 2000A)
- ◆ High durability



◆ **Gel Filtration Chromatography COSMOSIL Dial-II**

- ◆ Ideal for the size-based separation of proteins and water soluble polymers
- ◆ Reduce undesirable adsorption

◆ **Column Selection Guide**



◆ **COSMOSIL Direct Cartridge Holder (New)**

The Direct Cartridge Holder can be used instead of the regular guard cartridge holder. As it screws directly into the column, no connecting tube is required for connection to analytical column!
All guard cartridges are compatible with both the Direct Cartridge Holder and the older Guard Cartridge Holder, as long as the I.D. is the same.

I.D.	Product No.	PKG size
4.6 mm	19989-71	1 PKG



COSMOCORE

Increased loading capacity
Excellent pH stability (1.5-10)

COSMOCORE 2.6C₁₈

Features

- ◆ Ultra high performance LC results with conventional HPLC equipment
- ◆ Same number of theoretical plates as sub-2 m columns with half the back pressure
- ◆ Increased loading capacity
- ◆ Excellent pH stability (1.5-10)



About Core-Shell Particles

Core-shell particles consist of a nonporous core inside a porous shell. By using these core-shell particles, one can achieve sharper peaks compared to fully porous silica gel particles of the same diameter with half the back pressure.

Ordering Information

Product Name	Product Number
2.1 mm I.D. X 30 mm	12632-31
2.1 mm I.D. X 50 mm	12631-41
2.1 mm I.D. X 75 mm	12630-51
2.1 mm I.D. X 100 mm	12614-71
2.1 mm I.D. X 150 mm	12612-91
3.0 mm I.D. X 30 mm	12611-01
3.0 mm I.D. X 50 mm	12609-51
3.0 mm I.D. X 75 mm	12608-61
3.0 mm I.D. X 100 mm	12607-71
3.0 mm I.D. X 150 mm	12602-21
4.6 mm I.D. X 30 mm	12601-31
4.6 mm I.D. X 50 mm	12600-41
4.6 mm I.D. X 75 mm	12599-91
4.6 mm I.D. X 100 mm	12598-01
4.6 mm I.D. X 150 mm	12597-11
4.6 mm I.D. X 250 mm	12596-21