



**COSMOSIL**

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

	5C18-MS-II	5C18-AR-II	5C18-PAQ
Silica Gel	High Purity Porous Spherical Silica		
Average Particle Size	3, 5, 15 µm		
Average Pore Size	approx. 120 Å		
Stationary Phase / Bonding Type	Monomeric Type 	Polymeric Type 	
Main Interaction	Hydrophobic Interaction		
pH Range	2-10	1.5-7.5	2-7.5
Carbon Content	approx. 16%	approx. 17%	approx. 11%

## COSMOSIL 5C18-MS-II

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

## COSMOSIL 5C18-AR-II

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

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

## Column Selection Guide for ODS

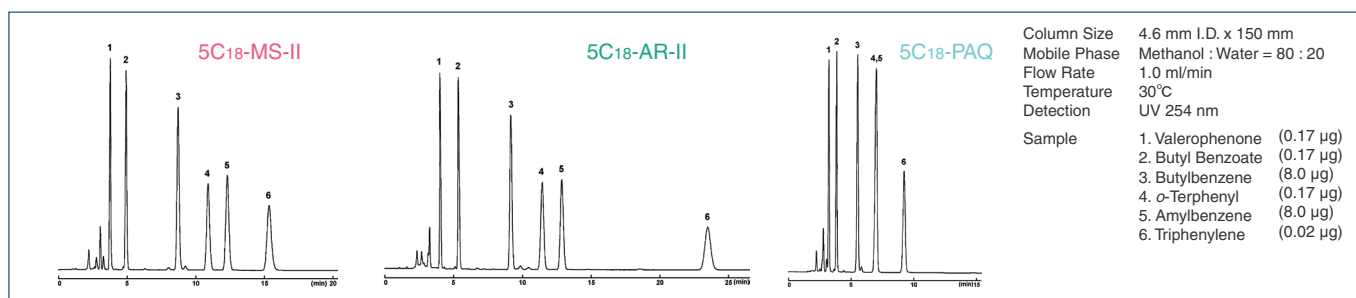
	COSMOSIL 5C18-MS-II	COSMOSIL 5C18-AR-II	COSMOSIL 5C18-PAQ	Highly Recommended
Basic Compounds	+++	+	++	COSMOSIL 5C18-MS-II
Metal Coordination Compounds	++	++	++	COSMOSIL 5C18-MS-II
Acidic Buffer as Mobile Phase	++	+++	++	COSMOSIL 5C18-AR-II
Hydrophilic Compounds	+	+	+++	COSMOSIL 5C18-PAQ

+++ : Highly Recommended ++ : Recommended + : Usable

(Other Compounds: COSMOSIL 5C18-MS-II)

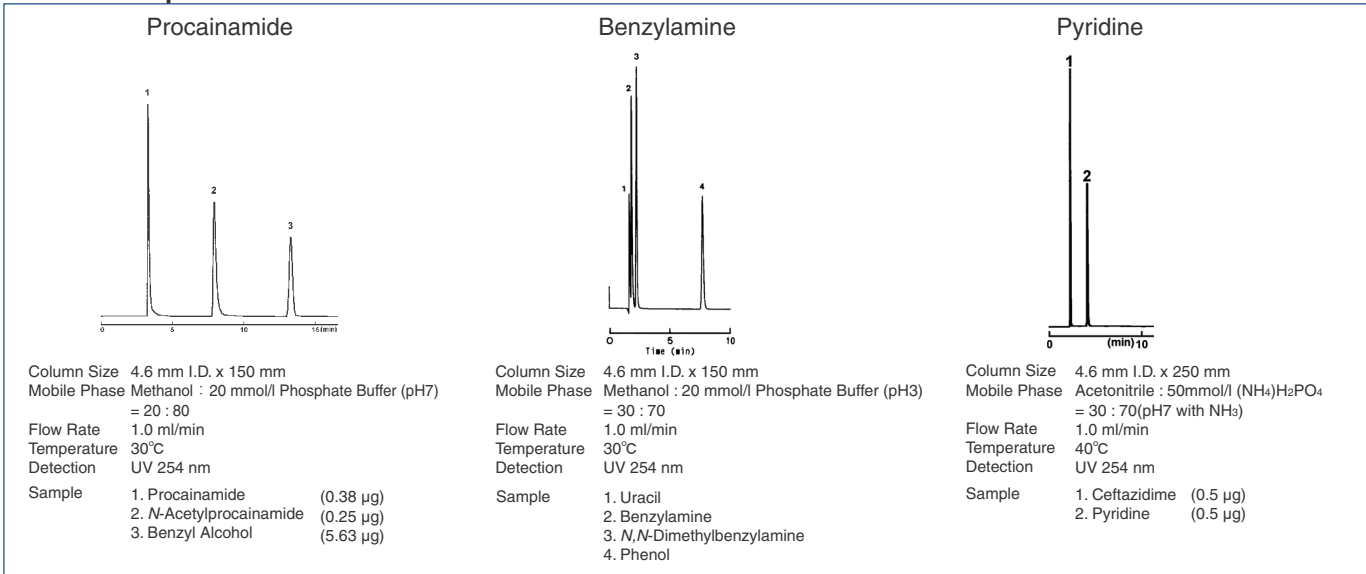
- **Basic Compounds** : MS-II shows strongest durability. In some cases, AR-II is not recommended because the tailing may be occurred.
- **Metal Coordination Compounds** : There is not so much difference between three ODS. So the most multi-purpose MS-II is recommendable.
- **Acidic Buffer as Mobile Phase** : AR-II is the strongest acid resistible column in our ODS. Also, MS-II and PAQ can be used in acidic condition.
- **Hydrophilic Compounds** : PAQ is able to be stabilized the retention time. MS-II and AR-II can be used, but the stability is not good. (especially used 100% water as mobile phase)

## Difference of Separation Property



**COSMOSIL 5C18-MS-II**

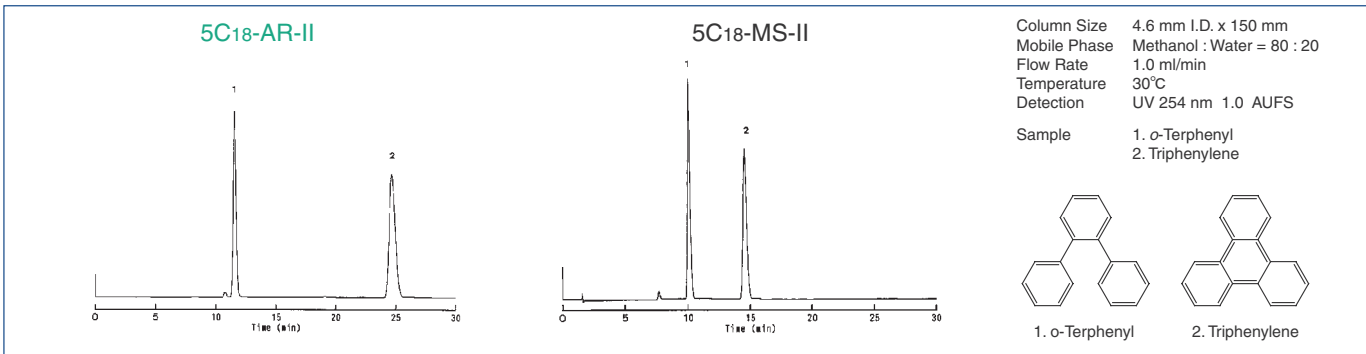
• **Basic Compounds**



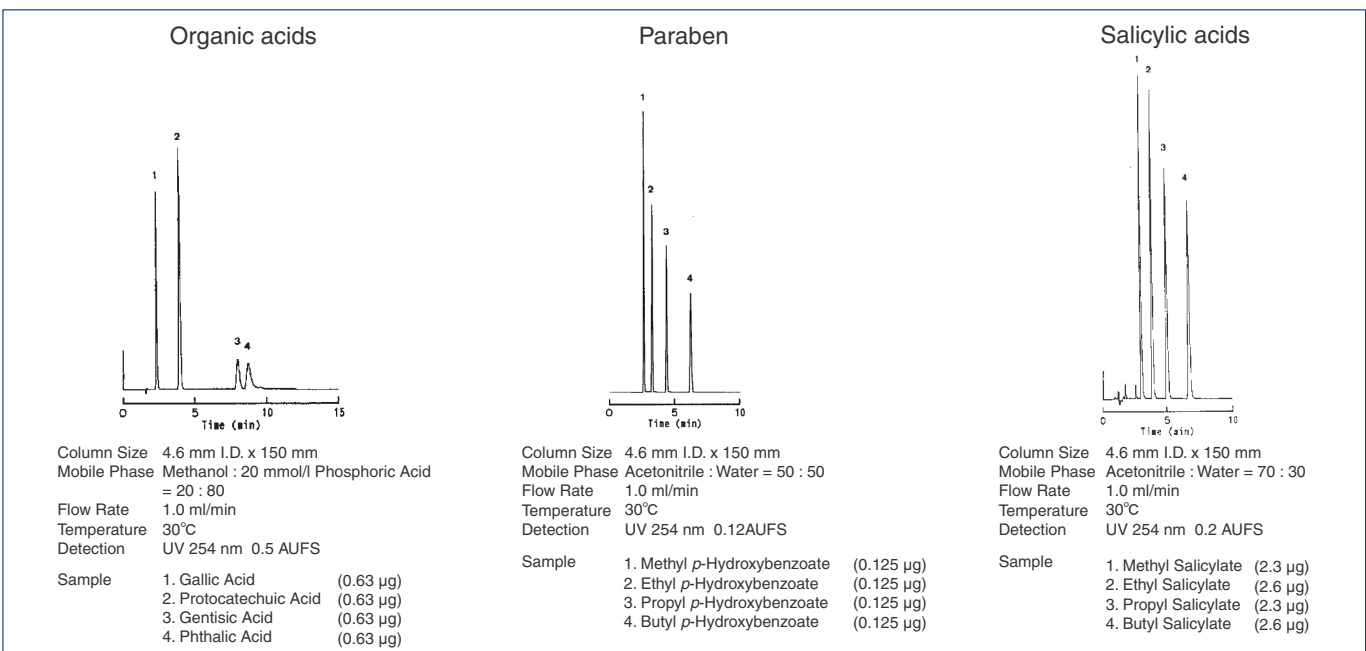
**COSMOSIL 5C18-AR-II**

• **Stereoselectivity**

The polymeric type of COSMOSIL 5C18-AR-II shows superior stereoselectivity.

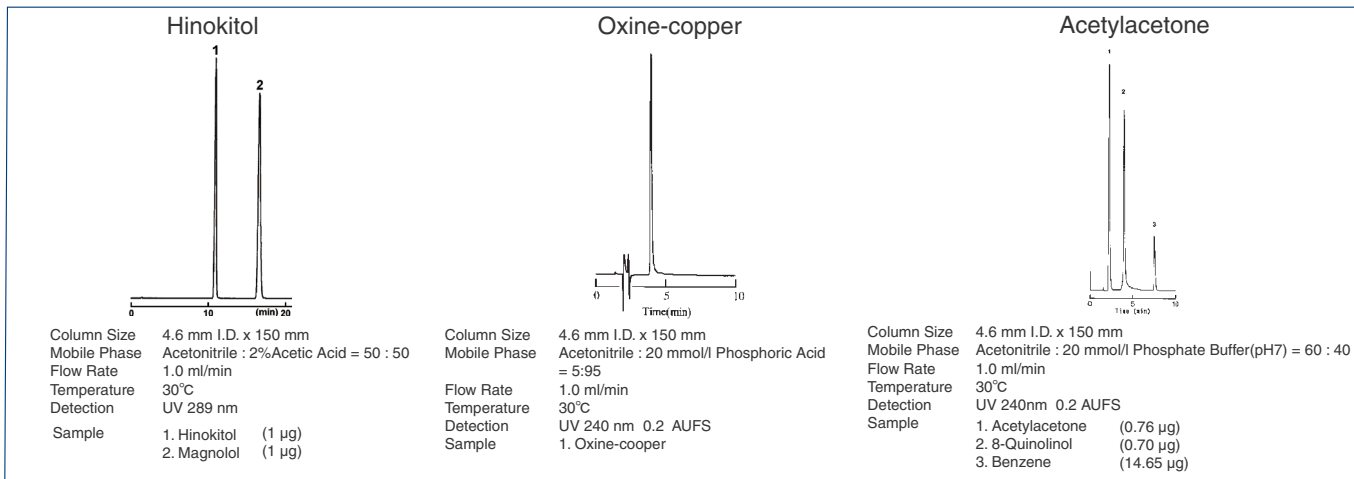


• **Acidic Compounds**



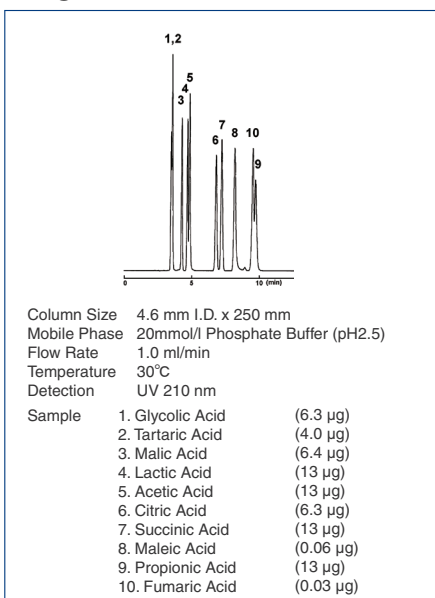
## COSMOSIL 5C18-AR-II (continued)

### • Metal Coordination Compounds

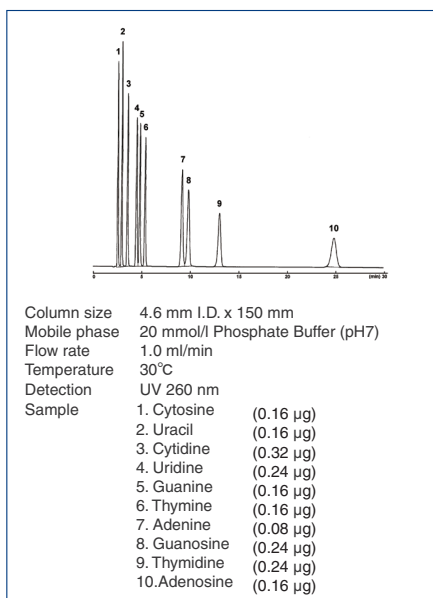


## COSMOSIL 5C18-PAQ

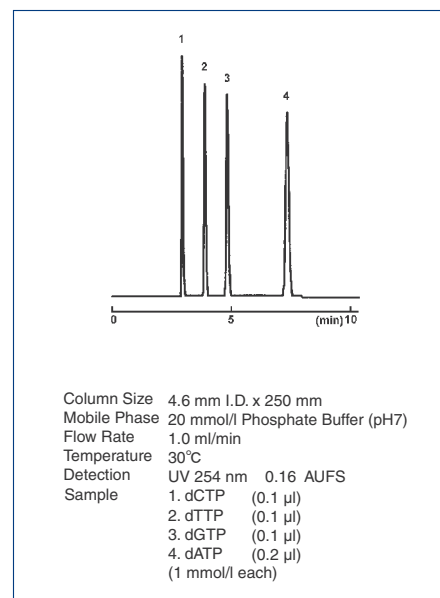
### • Organic Acid



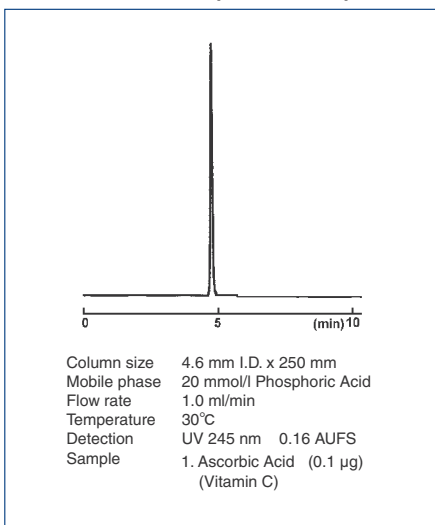
### • Nucleic-acid Base



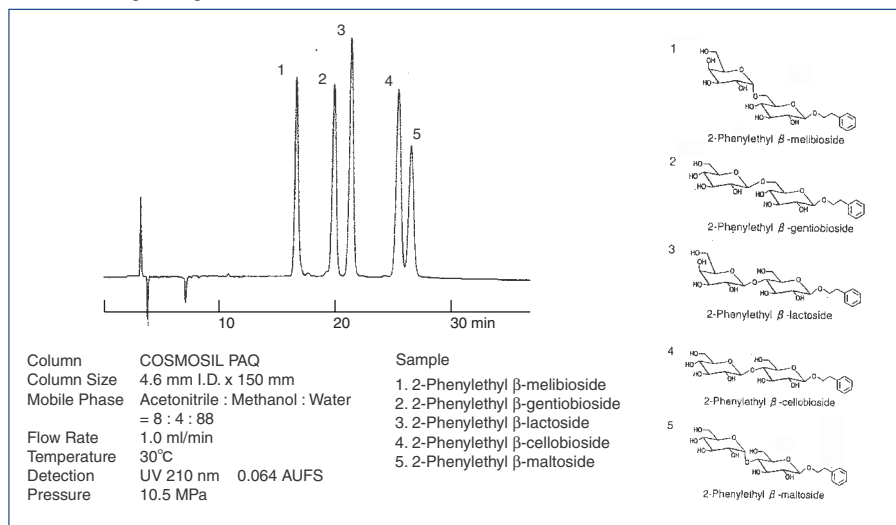
### • dNTP



### • Ascorbic Acid (Vitamin C)



### • 2-Phenylethyl Glucosides



## Ordering Information

### • Particle Size: 5 µm (Analytical Columns)

	Column Size	COSMOSIL 5C <sub>18</sub> -MS-II Product Number	COSMOSIL 5C <sub>18</sub> -AR-II Product Number	COSMOSIL 5C <sub>18</sub> -PAQ Product Number
Packed Column	1.0 mm I.D x 50 mm	02824-31	02955-21	05792-61
	1.0 mm I.D x 150 mm	02896-01	02951-61	05793-51
	2.0 mm I.D x 30 mm	05876-71	05098-71	05878-51
	2.0 mm I.D x 50 mm	04355-21	34400-81	05794-41
	2.0 mm I.D x 100 mm	05597-31	34469-11	05470-71
	2.0 mm I.D x 150 mm	38025-91	37992-51	34449-71
	2.0 mm I.D x 250 mm	05761-61	05272-71	05795-31
	3.0 mm I.D x 100 mm	05458-51	05791-71	05796-21
	3.0 mm I.D x 150 mm	34245-31	38028-61	05797-11
	3.0 mm I.D x 250 mm	34254-11	38029-51	05798-01
	4.6 mm I.D x 30 mm	34341-61	05877-61	05879-41
	4.6 mm I.D x 50 mm	38017-01	38142-51	34451-21
	4.6 mm I.D x 100 mm	38018-91	38143-41	05799-91
	4.6 mm I.D x 150 mm	38019-81	38144-31	02486-71
	4.6 mm I.D x 150 mm 3 lots set	09397-73	09396-83	-
	4.6 mm I.D x 250 mm	38020-41	38145-21	02485-81
	6.0 mm I.D x 150 mm	38021-31	38146-11	34419-61
	6.0 mm I.D x 250 mm	38022-21	38147-01	05800-41
	10.0 mm I.D x 50 mm	05789-21	05369-21	05801-31
	10.0 mm I.D x 150 mm	34355-91	34350-41	34466-41
	10.0 mm I.D x 250 mm	38023-11	38149-81	34376-21
	20.0 mm I.D x 150 mm	05091-41	34316-01	34476-11
	20.0 mm I.D x 250 mm	38024-01	38150-41	34373-51
28.0 mm I.D x 250 mm	05760-71	34362-91	34456-71	
Guard Column	4.6 mm I.D x 10 mm	38014-31	38141-61	02484-91
	4.6 mm I.D x 10 mm Cartridge*	38015-89	38008-89	-
	10.0 mm I.D x 20 mm	38016-11	38148-91	34457-61
	20.0 mm I.D x 20 mm	05790-81	34458-51	05803-11
	20.0 mm I.D x 50 mm	34371-71	34479-81	05804-01
	28.0 mm I.D x 50 mm	34347-01	34363-81	34455-81

\*3 Cartridges included, needs a holder

### • Particle Size: 15 µm (Preparative Columns)

	Column Size mm I.D. x mm	COSMOSIL 15C <sub>18</sub> -MS-II Product Number	COSMOSIL 15C <sub>18</sub> -AR-II Product Number	COSMOSIL 15C <sub>18</sub> -PAQ Product Number
Packed Column	28.0 mm I.D x 250 mm	34525-61	37978-51	05888-21
	50.0 mm I.D x 250 mm	05886-41	38058-71	05890-71
	50.0 mm I.D x 500 mm	34531-71	05884-61	05891-61
Guard Column	28.0 mm I.D x 50 mm	05885-51	38030-11	05887-31
	50.0 mm I.D x 50 mm	34527-41	38057-81	05889-11

### • Particle Size: 3 µm (Fast LC Columns)

	Column Size mm I.D. x mm	COSMOSIL 3C <sub>18</sub> -MS-II Product Number	COSMOSIL 3C <sub>18</sub> -AR-II Product Number
Packed Column	2.0 mm I.D x 50 mm	05514-01	05478-91
	4.6 mm I.D x 10 mm	38065-71	38068-41
	4.6 mm I.D x 50 mm	38066-61	38069-31
	4.6 mm I.D x 100 mm	38067-51	38070-91

Other size may be available. Please enquire.

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