

by Nacalai Tesque

- C18-AR-II, PYE, NPE, and C1 phases available
- Unusual PYE phase for isomer separations
- Two phases: Buckyprep and Cosmosil PBB are available for the separation of fullerenes
- HIC column for proteins
- C22-AR-II for fat-soluble compounds

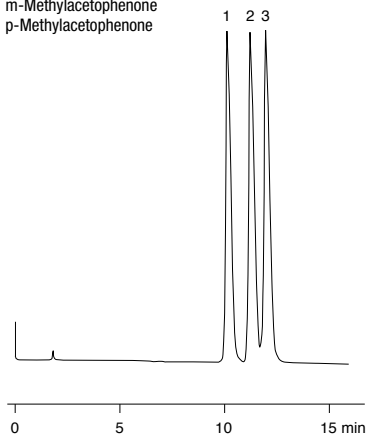
Cosmosil™ columns provide high efficiency, high resolution separations. The C18 AR-II phase provides improved peak shape for chelating compounds and increased acid resistance. A new C22-AR-II phase improves analysis of fat-soluble compounds. In addition, a new HIC column is available for protein separations. Lastly, two unique bonded chemistries are available: PYE (2-(1-pyrenyl)ethyl) and NPE (nitro-phenylethyl). The bonded pyrene rings of these phases provide rigidity and electron-donating ability and are also well suited for isomer separations.

## Material Characteristics

Packing Material	Particle Shape/Size (µm)	Pore Size (Å)	Surface Area (m <sup>2</sup> /g)	Carbon Load %	End Capping
Cosmosil Silica	Spher. 5, 10	110	330	—	—
Cosmosil C18	Spher. 5, 10	110	330	20.0	Yes
Cosmosil C18-P	Spher. 5, 10	110	330	12.5	Yes
Cosmosil C8	Spher. 5, 10	110	330	12.5	Yes
Cosmosil TMS (C1)	Spher. 5, 10	110	330	5.0	Yes
Cosmosil Phenyl	Spher. 5, 10	110	330	9.5	Yes
Cosmosil PYE (2(1-pyrenyl)ethyl)	Spher. 5, 10	110	330	18.0	Yes
Cosmosil NPE (nitrophenylethyl)	Spher. 5, 10	120	300	9.0	Yes
Cosmosil NH <sub>2</sub>	Spher. 5, 10	110	330	6.0	—
Cosmosil CN-R	Spher. 5, 10	110	330	8.0	Yes
Cosmosil CN-N	Spher. 5, 10	110	330	6.0	No
Cosmosil C18-AR (polymeric)	Spher. 5, 10	120	300	16.0	Yes
Cosmosil C18-MS (monomeric)	Spher. 5, 10	120	300	16.0	Yes
Cosmosil C22-AR-II	Spher. 5	120	300	19.0	Yes
Cosmosil HIC	Spher. 5	300	150	—	Yes

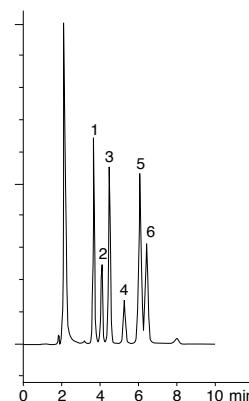
### App ID 5269 | Isomers of Methylacetophenone

**Column:** Cosmosil PYE  
**Dimensions:** 150 x 4.6 mm  
**Part No.:** CHO-3095  
**Mobile Phase:** Methanol/Water (60:40)  
**Flow Rate:** 1.0 mL/min  
**Detection:** UV @ 254 nm  
**Temperature:** 30 °C  
**Sample:** 1. o-Methylacetophenone  
 2. m-Methylacetophenone  
 3. p-Methylacetophenone



### App ID 5271 | Dioxins

**Column:** Cosmosil NPE  
**Dimensions:** 150 x 4.6 mm  
**Part No.:** CHO-3105  
**Mobile Phase:** Methanol/Water (90:10)  
**Flow Rate:** 1.0 mL/min  
**Detection:** UV @ 254 nm  
**Temperature:** 30 °C  
**Sample:** Polychlorodibenzo-p-Dioxins(PCDDs)  
 1. 1,6-PCDD  
 2. 1,9-PCDD  
 3. 1,2,6-PCDD  
 4. 1,2,9-PCDD  
 5. 1,2,4,6-PCDD  
 6. 1,2,4,9-PCDD



by Nacalai Tesque

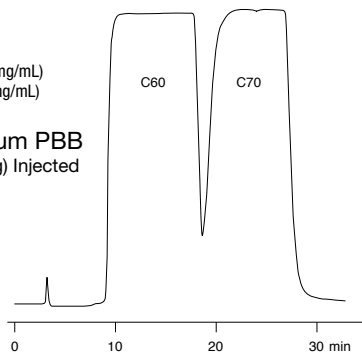
App ID 5284

## Preparative Separation of Fullerenes

**Dimensions:** 250 x 20 mm  
**Part No.:** CHO-3479  
**Mobile Phase:** Toluene  
**Flow Rate:** 18 mL/min  
**Sample:**  
 1. C60 dissolved in Toluene (3.5 mg/mL)  
 2. C70 dissolved in Toluene (3.5 mg/mL)

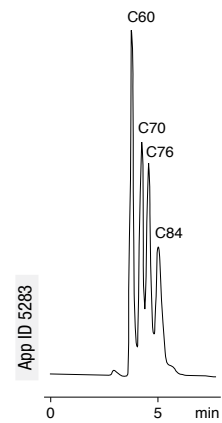
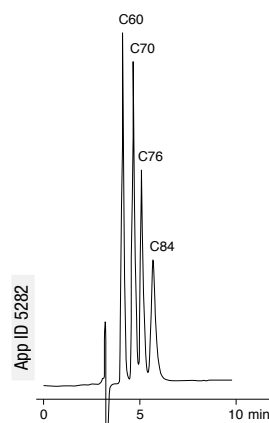
Cosmosil 5 µm PBB  
 150 mL (530 mg) Injected

Cosmosil PBB improves the sample load capacity about three times over Cosmosil Buckyprep



## Higher Fullerenes

**Column:** Cosmosil 5 µm PBB  
**Dimensions:** 250 x 4.6 mm  
**Part No.:** CHO-3477



## ORDERING INFORMATION

### Cosmosil Columns

Part No.	Mfr. No.	Description	Size (mm)	Price
<b>5 µm C18 - AR</b> [Only use if specified by your method. Use C18-AR-II for all new applications]				
CHO-3059	378-58	5 µm C18-AR Guard Column	10 x 4.6	
CHO-3063	378-61	5 µm C18-AR	150 x 4.6	
CHO-3064	378-62	5 µm C18-AR	250 x 4.6	
CHO-3076	378-66	5 µm C18-AR	250 x 10.0	
<b>5 µm C18 - AR-II</b> [You should select C18-AR-II instead of C18 above for all routine and new applications]				
CHO-4158	381-41	5 µm C18-AR-II Guard Column	10 x 4.6	
CHO-4161	381-42	5 µm C18-AR-II	50 x 4.6	
CHO-4163	381-44	5 µm C18-AR-II	150 x 4.6	
CHO-4164	381-45	5 µm C18-AR-II	250 x 4.6	
CHO-4167	381-49	5 µm C18-AR-II	250 x 10.0	
<b>5 µm C18 - MS</b>				
CHO-3071	379-71	5 µm C18-MS	150 x 4.6	
CHO-3072	379-72	5 µm C18-MS	250 x 4.6	
<b>5 µm C18 - AR - 300Å</b>				
CHO-3085	379-14	5 µm C18-AR-300	250 x 4.6	
<b>5 µm PYE</b>				
CHO-3092	379-03	5 µm PYE Guard Column	10 x 4.6	
CHO-3467	750-01	5 µm PYE	50 x 4.6	
CHO-3095	378-37	5 µm PYE	150 x 4.6	
CHO-3469	379-69	5 µm PYE	250 x 4.6	
CHO-3470	750-03	5 µm PYE	250 x 10.0	
<b>5 µm NPE</b>				
CHO-3105	379-02	5 µm NPE	150 x 4.6	
CHO-4169	379-90	5 µm NPE	250 x 4.6	
<b>Buckyprep</b>				
CHO-4170	379-83	Buckyprep Guard Column	10 x 4.6	
CHO-4171	379-84	Buckyprep Guard Column	20 x 10.0	
CHO-3113	379-77	Buckyprep	250 x 4.6	
CHO-3475	379-81	Buckyprep	250 x 10.0	
CHO-3476	379-82	Buckyprep	250 x 20.0	
<b>Cosmosil PBB - for Fullerenes</b>				
CHO-3477	379-80	5 µm PBB	250 x 4.6	
<b>5 µm C22 - AR-II - 120Å</b>				
CHO-7633	04598-51	5 µm C22-AR-II	150 x 4.6	
CHO-7634	04599-41	5 µm C22-AR-II	250 x 4.6	
<b>5 µm HIC - 300Å</b>				
CHO-7635	04263-21	5 µm HIC	50 x 4.6	



All other Nacalai Tesque/Cosmosil columns are available on request.