

WE ARE HERE TO HELP

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# OSAKA SODA ADME COLUMN

專為極性樣品設計

## FEATURE

- ADME-HR 管柱為OSAKA SODA 獨有的合成技術
- C12構造的籠狀結構,以及高極性的表面親和力
- 能承受**100%純水相的環境**
- 相較一般逆相管柱它能提供給您更多意想不到的分析效果

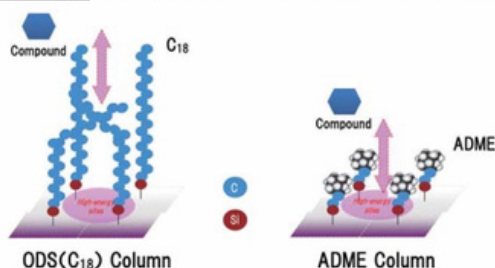
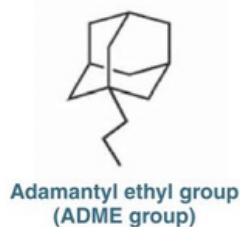
### ADME-HR

| Functional group | Pore size (A) | Particle size (um) | Surface Area (m2/g) | Carbon loadong (%) | Pressure resistance (Mpa) | pH range | USP class No. |
|------------------|---------------|--------------------|---------------------|--------------------|---------------------------|----------|---------------|
| C12 (Adamantyl)  | 100           | 2,3,5              | 310                 | 12                 | 20                        | 2-9      | -             |

### ADME-HR INERT

| Functional group | Pore size (A) | Particle size (um) | Surface Area (m2/g) | Carbon loadong (%) | Pressure resistance (Mpa) | pH range | USP class No. |
|------------------|---------------|--------------------|---------------------|--------------------|---------------------------|----------|---------------|
| C12 (Adamantyl)  | 100           | 3                  | 310                 | 12                 | 50                        | 2-9      | -             |

## 獨家官能基設計 ADME



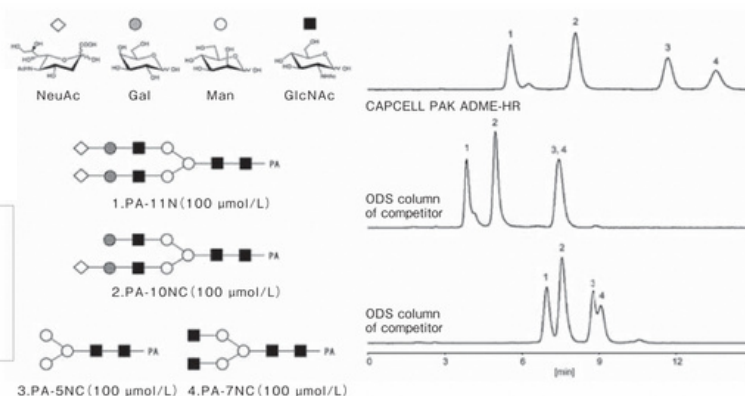
鍵結C12獨特官能基,提供全新分離思路!

較短鍊的C12 籠狀結構,增加樣品與極性表面的接觸面積,提升對極性樣品的滯留能力。

## N-glycan 分析

### ■ PA (pyridylamino) glycans

與其他公司的ODS管柱相比, CAPCELL PAK ADME-HR不僅顯示出更高的保留率,而且實現了完全的基線分離。



#### HPLC Conditions

Column size : S3 : 2.1 mm i.d. x 150 mm  
 Mobile phase : 20 mmol/L CH<sub>3</sub>COONH<sub>4</sub> / CH<sub>3</sub>CN = 95 / 5  
 Flow rate : 200 μL/min  
 Temperature : 40 °C  
 Detection : FL Ex. 310 nm, Em. 380 nm  
 Inj. vol. : 2 μL  
 Sample dissolved in : H<sub>2</sub>O

# OSAKA SODA MGII COLUMN

分析方法開發的首選

## FEATURE

- 適合在中性環境下分離鹼性化合物
- 良好的**泛用性**
- 卓越的批次間重複性
- 高水準的耐鹼性
- 最好的**避免矽醇基的干擾**

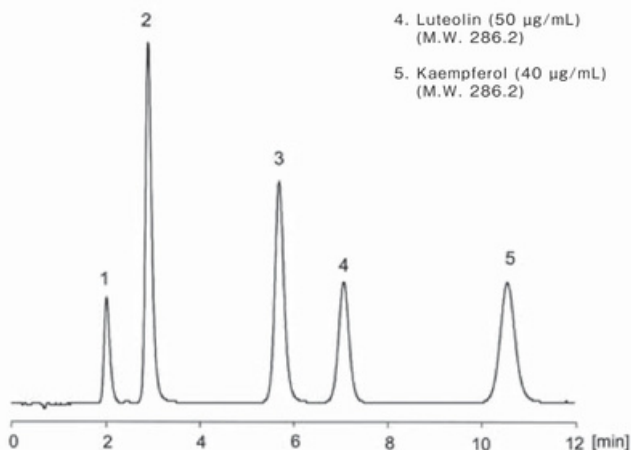


## MG II Column

| Functional group | Pore size (A) | Particle size (um) | Surface Area (m2/g) | Carbon loadong (%) | Pressure resistance (Mpa) | pH range | USP class No. |
|------------------|---------------|--------------------|---------------------|--------------------|---------------------------|----------|---------------|
| C18 (octadecyl)  | 100           | 3                  | 300                 | 16                 | 20                        | 2-10     | L1            |
| C18 (octadecyl)  | 100           | 5                  | 300                 | 16                 | 20                        | 2-10     | L1            |

## 黃酮類化合物

使用CAPCELL PAK C18 MG II S3的管柱分析芸香苷、楊梅黃酮、槲皮素、木犀草素、山奈酚。



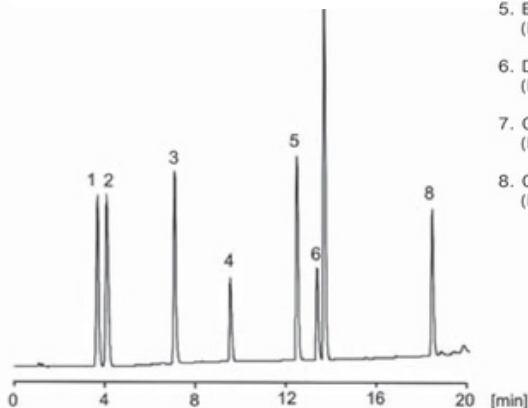
1. Rutin (50 µg/mL) (M.W. 610.5)
2. Myricetin (50 µg/mL) (M.W. 318.2)
3. Quercetin (50 µg/mL) (M.W. 302.2)
4. Luteolin (50 µg/mL) (M.W. 286.2)
5. Kaempferol (40 µg/mL) (M.W. 286.2)

### HPLC Conditions

Column : CAPCELL PAK C18 MG II S3 ; 2.0 mm i.d. x 50 mm  
 Mobile phase : 0.1 vol% HCOOH / CH<sub>3</sub>OH = 60 / 40  
 Flow rate : 200 µL/min  
 Temperature : 40 °C  
 Detection : PDA 380 nm  
 Inj. vol. : 1 µL  
 Sample dissolved in : Mobile phase

## 小分子藥物分析

分析解熱鎮痛劑、止咳和祛痰藥物、抗組胺藥和抗生素等各種成分。



1. Acetaminophen (50 µg/mL) (M.W. 151.1)
2. Procaterol (50 µg/mL) (M.W. 290.4)
3. Cefdinir (50 µg/mL) (M.W. 395.4)
4. Tulobuterol (50 µg/mL) (M.W. 227.7)
5. Epinastine (50 µg/mL) (M.W. 249.3)
6. Dextromethorphan (50 µg/mL) (M.W. 271.4)
7. Olopatadine (50 µg/mL) (M.W. 337.4)
8. Cefditoren Pivoxil (50 µg/mL) (M.W. 620.7)

### HPLC Conditions

Column : CAPCELL PAK C18 MG II S3 ; 2.0 mm i.d. x 100 mm  
 Mobile phase : A) 0.1 vol% H<sub>3</sub>PO<sub>4</sub> / B) 0.1 vol% H<sub>3</sub>PO<sub>4</sub> / CH<sub>3</sub>CN  
 B : 8 % (0 min) -> 55 % (20 min) -> 8 % (20 min) Gradient  
 Flow rate : 200 µL/min  
 Temperature : 40 °C  
 Detection : PDA 220 nm  
 Inj. vol. : 1 µL  
 Sample dissolved in : Epinastine was dissolved in the solution (CH<sub>3</sub>OH / 1 vol% H<sub>3</sub>PO<sub>4</sub> = 4 / 1) at 1000 µg/mL. Cefdinir was dissolved in 0.1 mol/L Phosphate buffer (pH 7). Cefditoren Pivoxil was dissolved in solution (CH<sub>3</sub>CN / H<sub>2</sub>O / H<sub>3</sub>PO<sub>4</sub> = 600 / 400 / 0.1). The other compounds were dissolved in 50 vol% CH<sub>3</sub>OH. Those compounds mixed together, diluted with 20 vol% CH<sub>3</sub>CN at 50 µg/mL.

# OSAKA SODA MGIII COLUMN

UHPLC首選管柱

## FEATURE

- 適合在中性環境下分離鹼性化合物
- 良好的**泛用性**
- 卓越的批次間重複性
- 高水準的耐鹼性
- 最好的**避免矽醇基的干擾**

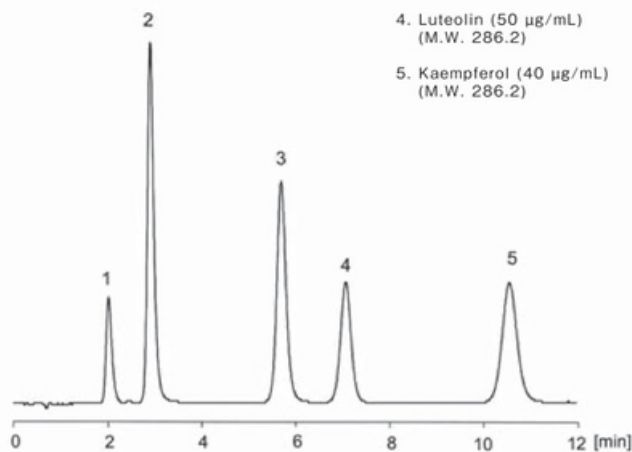


## MG II Column

| Functional group | Pore size (A) | Particle size (um) | Surface Area (m2/g) | Carbon loading (%) | Pressure resistance (Mpa) | pH range | USP class No. |
|------------------|---------------|--------------------|---------------------|--------------------|---------------------------|----------|---------------|
| C18 (octadecyl)  | 100           | 3                  | 300                 | 16                 | 20                        | 2-10     | L1            |
| C18 (octadecyl)  | 100           | 5                  | 300                 | 16                 | 20                        | 2-10     | L1            |

## 黃酮類化合物

使用CAPCELL PAK C18 MG II S3的管柱分析芸香苷、楊梅黃酮、槲皮素、木犀草素、山奈酚。



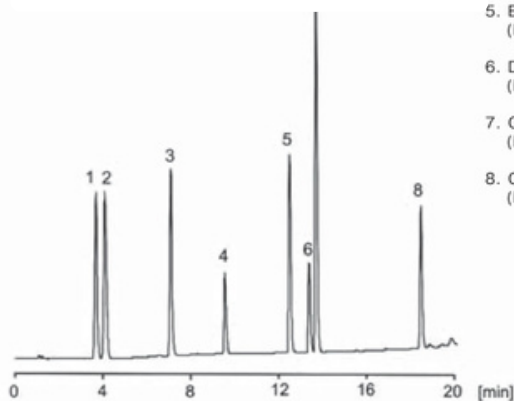
1. Rutin (50 µg/mL) (M.W. 610.5)
2. Myricetin (50 µg/mL) (M.W. 318.2)
3. Quercetin (50 µg/mL) (M.W. 302.2)
4. Luteolin (50 µg/mL) (M.W. 286.2)
5. Kaempferol (40 µg/mL) (M.W. 286.2)

### HPLC Conditions

Column : CAPCELL PAK C18 MG II S3 ; 2.0 mm i.d. × 50 mm  
 Mobile phase : 0.1 vol% HCOOH / CH<sub>3</sub>OH = 60 / 40  
 Flow rate : 200 µL/min  
 Temperature : 40 °C  
 Detection : PDA 380 nm  
 Inj. vol. : 1 µL  
 Sample dissolved in : Mobile phase

## 小分子藥物分析

分析解熱鎮痛劑、止咳和祛痰藥物、抗組胺藥和抗生素等各種成分。



1. Acetaminophen (50 µg/mL) (M.W. 151.1)
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6. Dextromethorphan (50 µg/mL) (M.W. 271.4)
7. Olopatadine (50 µg/mL) (M.W. 337.4)
8. Cefditoren Pivoxil (50 µg/mL) (M.W. 620.7)

### HPLC Conditions

Column : CAPCELL PAK C18 MG II S3 ; 2.0 mm i.d. × 100 mm  
 Mobile phase : A) 0.1 vol% H<sub>3</sub>PO<sub>4</sub> B) 0.1 vol% H<sub>3</sub>PO<sub>4</sub>, CH<sub>3</sub>CN  
 B 8 % (0 min) → 55 % (20 min) → 8 % (20.1 min) Gradient  
 Flow rate : 200 µL/min  
 Temperature : 40 °C  
 Detection : PDA 220 nm  
 Inj. vol. : 1 µL  
 Sample dissolved in : Epinastine was dissolved in the solution (CH<sub>3</sub>OH / 1 vol% H<sub>3</sub>PO<sub>4</sub> = 4 / 1) at 1000 µg/mL. Cefdinir was dissolved in 0.1 mol/L Phosphate buffer (pH 7). Cefditoren Pivoxil was dissolved in solution (CH<sub>3</sub>CN / H<sub>2</sub>O / H<sub>3</sub>PO<sub>4</sub> = 600 / 400 / 0.1). The other compounds were dissolved in 50 vol% CH<sub>3</sub>OH. Those compounds mixed together, diluted with 20 vol% CH<sub>3</sub>CN at 50 µg/mL.

# OSAKA SODA KG COLUMN

優越的PH耐受性

## FEATURE

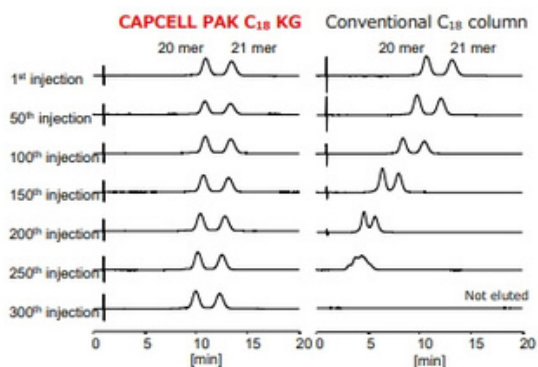
- 超廣的PH 耐受性 (1-12)
- 良好的泛用性
- 卓越的批次間重複性
- 高水準的耐鹼性
- 全新的高分子合成技術,改善矽基材的耐受性



## KG Column

| Functional group | Pore size (A) | Particle size (um) | Surface Area (m2/g) | Carbon loading (%) | Pressure resistance (Mpa) | pH range | USP class No. |
|------------------|---------------|--------------------|---------------------|--------------------|---------------------------|----------|---------------|
| C18 (octadecyl)  | 100           | 3                  | 320                 | 17                 | 20                        | 1-12     | L1            |
| C18 (octadecyl)  | 100           | 5                  | 320                 | 17                 | 20                        | 1-12     | L1            |

## 高溫耐受性

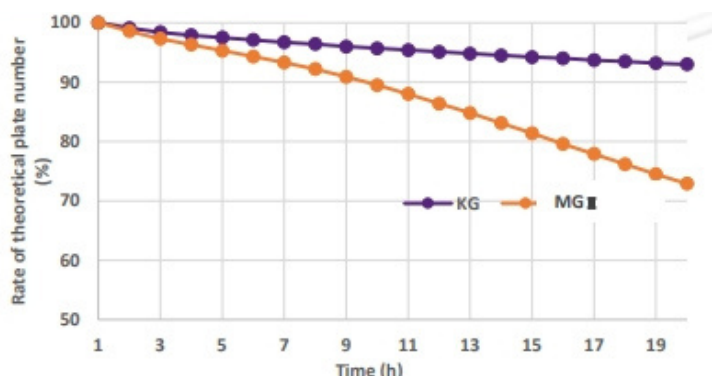


### 【HPLC Conditions】

Column : CAPCELL PAK C<sub>18</sub> KG S3 : 2.1 mm i.d. x 100 mm  
 Mobile phase : A) 15 mmol/L DBA, 50 mmol/L HFIP  
                   B) 15 mmol/L DBA, 50 mmol/L HFIP, 50 % CH<sub>2</sub>OH  
                   B: 73 % (0 min) -> 78 % (20 min) -> 73 % (20.1 min) Gradient  
 Flow rate : 200 mL/min  
 Temperature : 60 °C  
 Detection : UV 270 nm  
 Inj. vol. : 2 mL  
 Sample : 100 mg/mL each in 10 mmol/L Tris-HCl buffer (pH 8)

在60度下注射300針依然保持高效分離能力！

## 超強pH耐受性



在pH 11 情況下運行 19 小時管柱依然保持高效。



# OSAKA SODA CORE COLUMN

提升分析效能

## FEATURE

- 在HPLC系統達到近乎UHPLC的效果
- 高效分析,縮短分析時間
- 卓越的批次間重複性
- 提高分析效能
- 降低螯合物所造成的脫尾

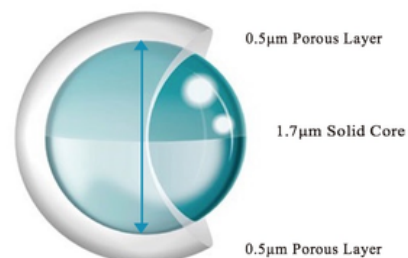


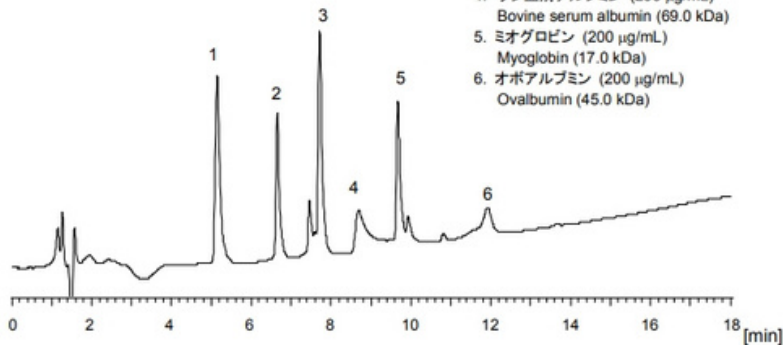
Fig. 1 Core shell structure

## CORE Column

|                  | Functional group | Pore size (A) | Particle size (µm) | Surface Area (m <sup>2</sup> /g) | Carbon loading (%) | Pressure resistance (Mpa) | pH range | USP class No. |
|------------------|------------------|---------------|--------------------|----------------------------------|--------------------|---------------------------|----------|---------------|
| C18 (octadecyl)  |                  | 90            | 2.7                | 150                              | 7                  | 60                        | 1.5-10   | L1            |
| MP (middle pore) |                  | 160           | 2.7                | 90                               | 5                  | 60                        | 2-10     | L1            |

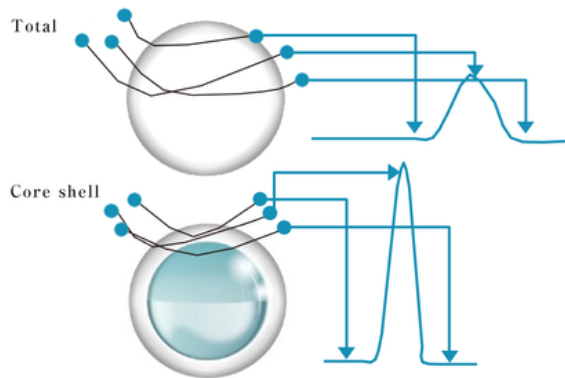
## 蛋白質分析

1. リボヌクレアーゼ A (200 µg/mL)  
Ribonuclease A (13.7 kDa)
2. チトクローム C (200 µg/mL)  
Cytochrome C (12.4 kDa)
3. リゾチーム (200 µg/mL)  
Lysozyme (14.3 kDa)
4. ウシ血清アルブミン (200 µg/mL)  
Bovine serum albumin (69.0 kDa)
5. ミオグロビン (200 µg/mL)  
Myoglobin (17.0 kDa)
6. オボアルブミン (200 µg/mL)  
Ovalbumin (45.0 kDa)



### 【HPLC Conditions】

Column : CAPCELL CORE WP S2.7 ; 2.1 mm i.d. x 100 mm  
 Mobile phase : A) 0.1 vol% TFA, B) 0.1 vol% TFA, CH<sub>3</sub>CN  
 B 20% (0 min) → 70% (20 min) → 20% (20.1 min) Gradient  
 Flow rate : 200 µL/min  
 Temperature : 40 °C  
 Detection : UV 220 nm  
 Inj. vol. : 2 µL  
 Sample dissolved in : Each standard was dissolved at 2 mg/mL in H<sub>2</sub>O. 100 µL of all solutions were added together, and diluted to 1 mL with H<sub>2</sub>O.



減少溶質擴散效應提升分離能力！

