

The First Choice of OSAKA SODA C₁₈ column for LC / MS analysis

CAPCELL PAK C₁₈ MGIII is a column with excellent retention and reproducibility under acidic mobile phase conditions, which is widely used in LC / MS. MGIII is also designed as a low bleeding column, and ideal for high-sensitivity analysis with LC / MS. The UHPLC type (2 μm) released as the new lineup of MG series has 100 MPa pressure resistance, and can be applied to ultra-high-speed analysis.

Specifications

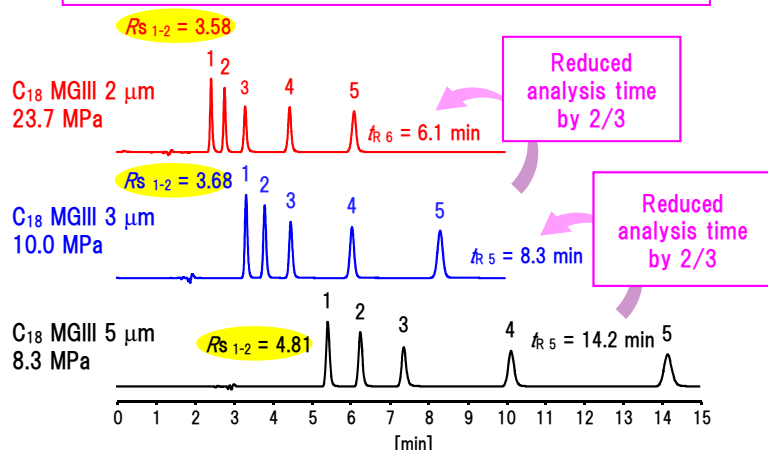
Type	Functional group	Pore size (Å)	Particle size (μm)	Specific surface area (m ² /g)	C%	Density (μmol/m ³)	Pressure resistance (MPa)	pH range	USP
MGIII	C ₁₈ (octadecyl group)	100	2	300	15	2.4	100	2~10	L1



Strong correlation with the existing MGIII (5 μm & 3 μm)

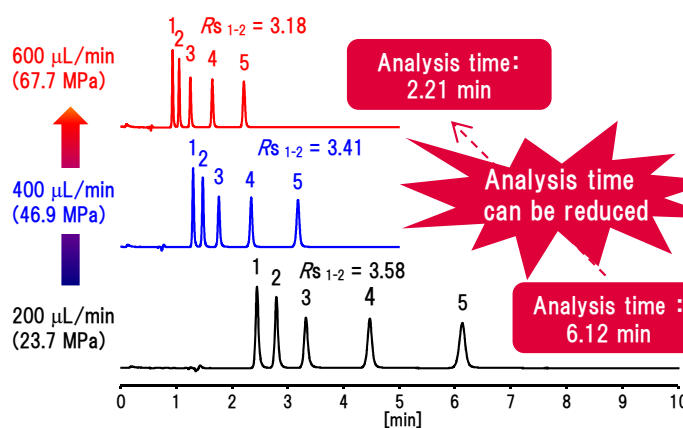
CAPCELL PAK C₁₈ MGIII S2 has the same selectivity as the existing lineup of 5 μm and 3 μm, and the analysis method can be transferred. Here we introduce an example of transfer method and shortening analysis time by increasing the flow rate, using the analysis of sulfa drugs with MGIII S2.

Method transfer in sulfa drugs analysis



[HPLC Conditions]
 Column size : S2 : 2.0 mm i.d. x 100 mm
 S3 : 2.0 mm i.d. x 150 mm
 S5 : 2.0 mm i.d. x 250 mm
 Mobile phase : 0.1 vol% HCOOH, H₂O / CH₃CN = 80 / 20
 Flow rate : 200 μL/min
 Temperature : 40 °C
 Detection : UV 270 nm
 Inj. Vol. : 3 μL
 Sample : 1. Sulfapyridine 2. Sulfamerazine 3. Sulfamethizole 4. Sulfamonomethoxine
 5. Sulfamethoxazole
 (10 μg/mL each)

Time shortening in an analysis of sulfa drugs by increasing the flow rate

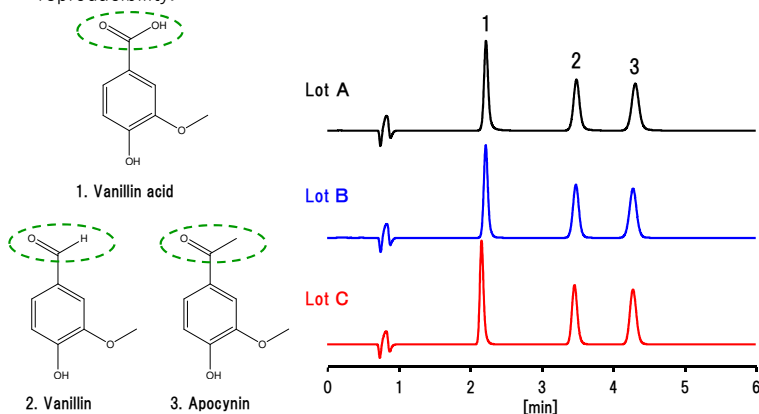


[HPLC Conditions]
 Column size : S2 : 2.0 mm i.d. x 100 mm
 Mobile phase : 0.1 vol% HCOOH, H₂O / CH₃CN = 80 / 20
 Flow rate : 200, 400, 600 μL/min
 Temperature : 40 °C
 Detection : UV 270 nm
 Inj. Vol. : 3 μL
 Sample : 1. Sulfapyridine 2. Sulfamerazine 3. Sulfamethizole 4. Sulfamonomethoxine
 5. Sulfamethoxazole
 (10 μg/mL each)

Outstanding lot reproducibility

< Vanillin related compounds >

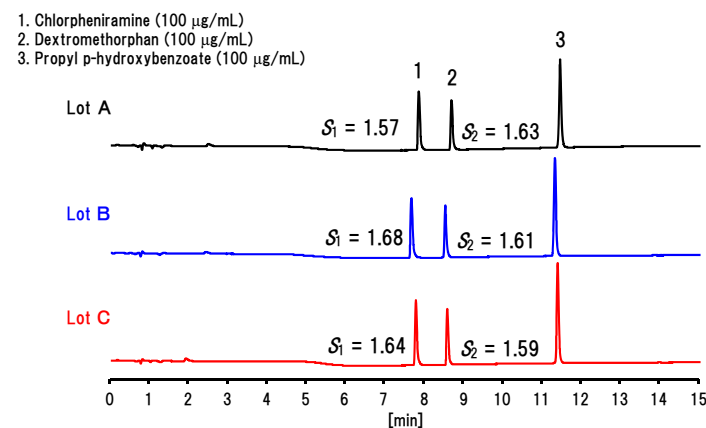
Among the MG series, MGIII with high surface polarity is suitable for separation of compounds with high polarity and similar structure, and has good lot reproducibility.



[HPLC Conditions]
 Column : CAPCELL PAK C₁₈ MGIII S2 : 2.0 mm i.d. x 50 mm
 Mobile phase : 0.1 vol% HCOOH / CH₃CN = 85 / 15
 Flow rate : 200 μL/min
 Temperature : 40 °C
 Detection : UV 254 nm
 Inj. vol. : 1 μL

< Cold medicines >

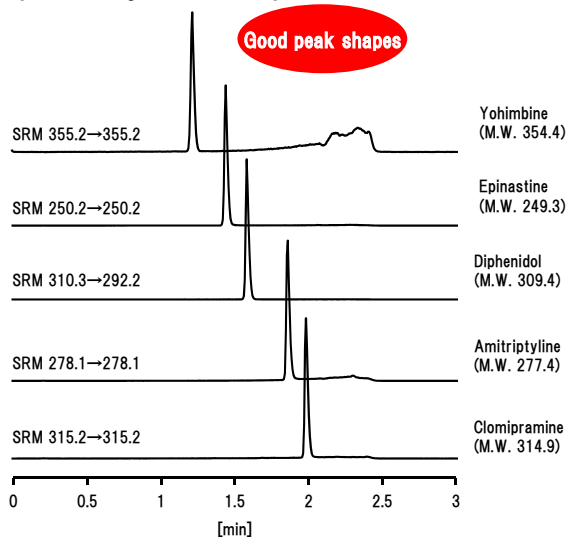
MGIII has a good reproducibility of retention time and peak shapes under acidic conditions.



[HPLC Conditions]
 Column : CAPCELL PAK C₁₈ MGIII S2 : 2.0 mm i.d. x 50 mm
 Mobile phase : A) 0.1 vol% HCOOH B) 0.1 vol% HCOOH, CH₃CN B 0 % (0 min) -> 95 % (15 min) -> 0 % (15.1 min)
 Flow rate : 200 μL/min
 Temperature : 40 °C
 Detection : UV 280 nm
 Inj. vol. : 1 μL

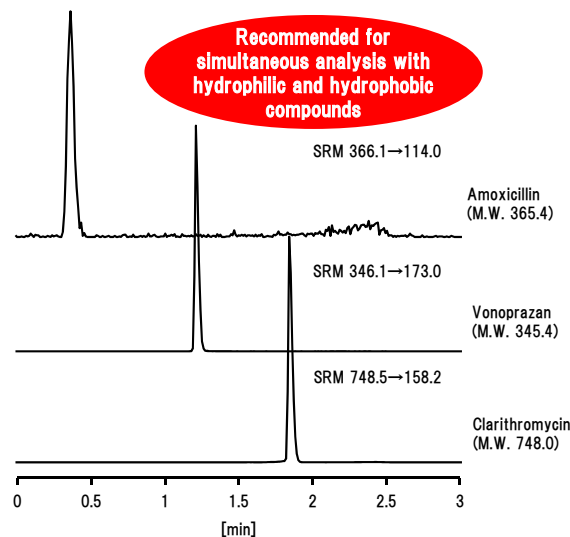
Application

<High-speed analysis of basic pharmaceuticals>



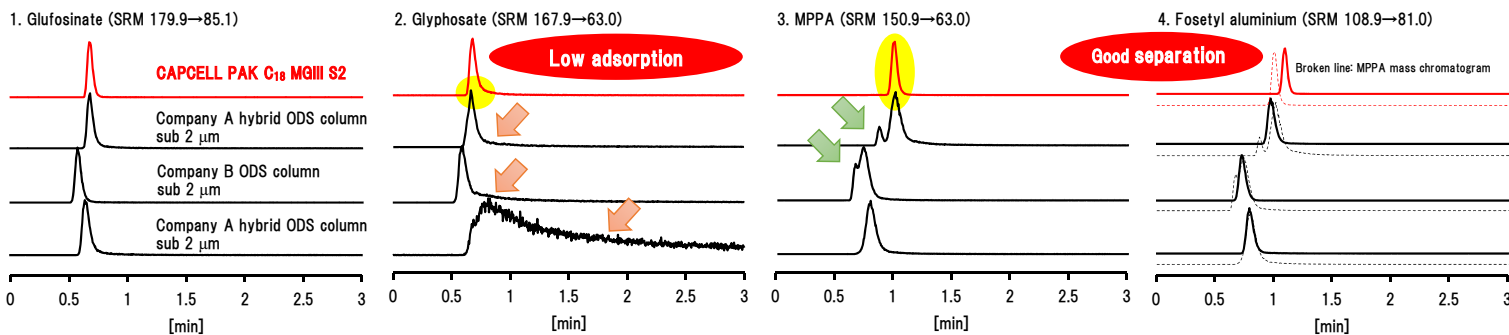
[HPLC Conditions]
 Column : CAPCELL PAK C₁₈ MGIII S2 : 2.0 mm i.d. x 50 mm
 Mobile phase : A) 10 mmol/L HCOONH₄, 0.1 vol% HCOOH in H₂O
 B) 10 mmol/L HCOONH₄, 0.1 vol% HCOOH in CH₃OH
 B 10 % (0 min) -> 90 % (2 min) -> 10 % (2.1 min)
 Flow rate : 700 μL/min
 Temperature : 50 °C
 Detection : MS/MS
 Ionization : ESI positive
 Inj. vol. : 5 μL
 Sample dissolved in : 50 vol% CH₃OH (50 ng/mL each)

<High-speed & simultaneous analysis of combination drug>

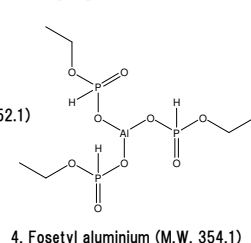
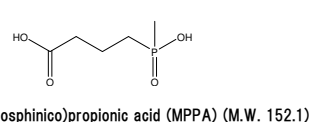
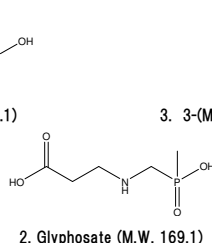
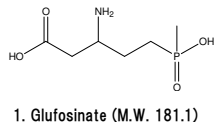


[HPLC Conditions]
 Column : CAPCELL PAK C₁₈ MGIII S2 : 2.0 mm i.d. x 50 mm
 Mobile phase : A) 10 mmol/L HCOONH₄, 0.1 vol% HCOOH in H₂O
 B) 10 mmol/L HCOONH₄, 0.1 vol% HCOOH in CH₃OH
 B 20 % (0 min) -> 100 % (2 min) -> 20 % (2.1 min)
 Flow rate : 600 μL/min
 Temperature : 40 °C
 Detection : MS/MS
 Ionization : ESI positive
 Inj. vol. : 5 μL
 Sample dissolved in : 50 vol% CH₃OH (50 ng/mL each)

<High-speed analysis of organophosphorus pesticides>



[HPLC Conditions]
 Column size : 2.0 or 2.1 mm i.d. x 50 mm
 Mobile phase : A) 10 mmol/L HCOONH₄, 0.1 vol% HCOOH in H₂O
 B) 10 mmol/L HCOONH₄, 0.1 vol% HCOOH in CH₃OH
 B 0 % (0 min) -> 5 % (2 min) -> 0 % (2.1 min)
 Flow rate : 200 μL/min
 Temperature : 40 °C
 Detection : MS/MS
 Ionization : ESI negative
 Inj. vol. : 5 μL
 Sample dissolved in : 50 vol% CH₃OH (50 ng/mL each)



Product Lineup

<CAPCELL PAK C₁₈ MGIII >

Product code	Product name	Particle size(μm)	Inner (mm)	Length(mm)
94070	CAPCELL PAK C18 MGIII (S2) 2.0X35	2	2.0	35
94071	CAPCELL PAK C18 MGIII (S2) 2.0X50	2	2.0	50
94072	CAPCELL PAK C18 MGIII (S2) 2.0X75	2	2.0	75
94073	CAPCELL PAK C18 MGIII (S2) 2.0X100	2	2.0	100
94074	CAPCELL PAK C18 MGIII (S2) 2.0X150	2	2.0	150

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