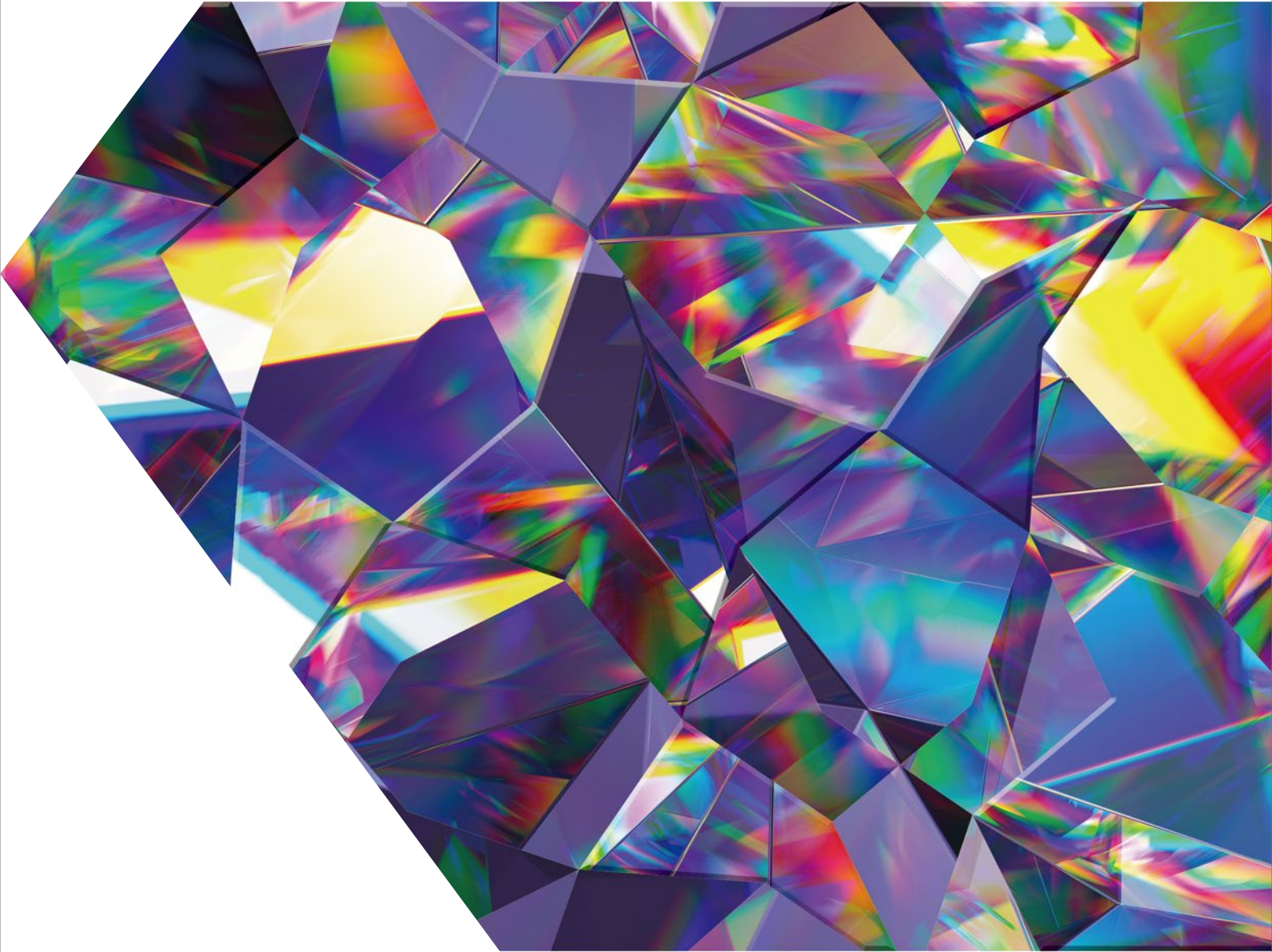




OSAKA SODA

CAPCELL PAK

ADME-HR / INERT ADME-HR



 OSAKA SODA CO., LTD.

A Cage-Structured C₁₂ column Achieving Strong Retention for Polar Analytes under Reversed-Phase Mode

Best second choice

CAPCELL PAK ADME-HR CAPCELL PAK INERT ADME-HR

The introduction of Adamantylethyl groups provides a hydrophobic interaction while maintaining high surface polarity, resulting in retaining polar analytes even under water-rich mobile phases.

Physical property values

CAPCELL PAK ADME-HR

Particle Size (μm)	Pore Size (nm)	Surface Area (m ² /g)	Ligand Density (μmol/m ²)	C%	pH Range	Max. Pressure (MPa)
2	10	310	2.7	12	2~9	100
3	10	310	2.7	12	2~9	20
5	10	310	2.7	12	2~9	20

CAPCELL PAK INERT ADME-HR

Particle Size (μm)	Pore Size (nm)	Surface Area (m ² /g)	Ligand Density (μmol/m ²)	C%	pH Range	Max. Pressure (MPa)
3	10	310	2.7	12	2~9	50

Structure of INERT Column



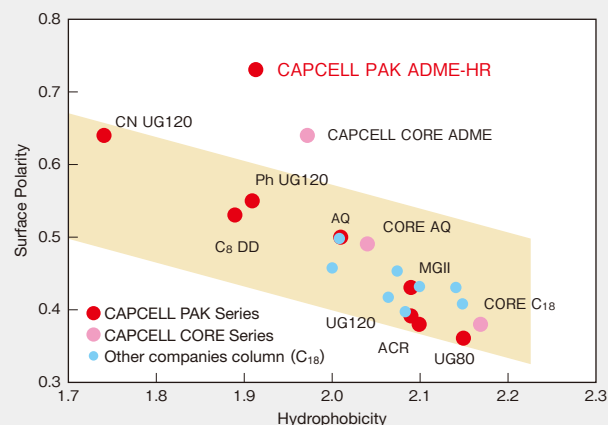
What is ADME?

ADME is an abbreviation of **Adamantane**, which consists of ten carbons in a diamond-like structure. Ethyl groups are introduced to the **Adamantane** as a spacer and employed as a unique bonded phase for the CAPCELL PAK ADME-HR columns.



Adamantylethyl Groups (ADME Groups)

Parameter Map

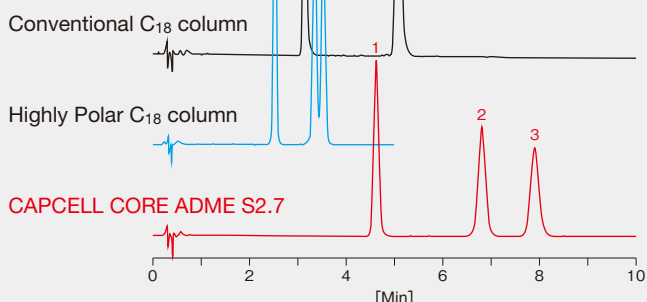
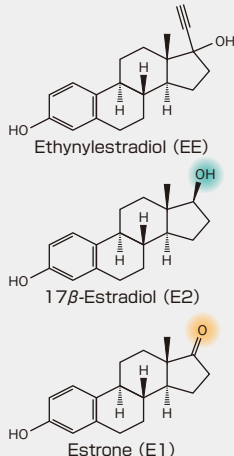


A Truly Unprecedented Balance of Hydrophobicity and Surface Polarity

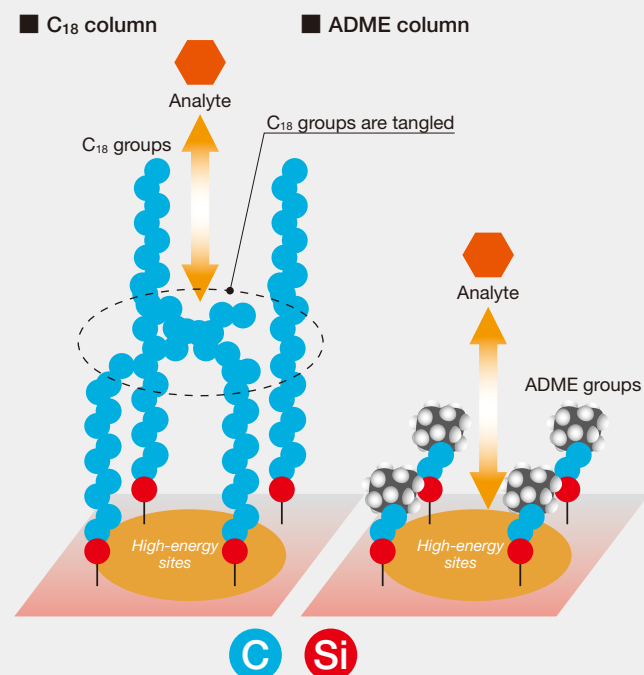
Comparison of Stereoselectivity

HPLC Conditions

Column size : 2.1 mm i.d. x 50 mm
 Mobile phase: H₂O / CH₃CN = 70 / 30
 Flow rate : 0.4 mL/min
 Temperature : 40 °C
 Detection : PDA 220 nm
 Inj. vol. : 3 μL (50 μg/mL each)
 Sample : 1. 17β-Estradiol (E2)
 2. Estrone (E1)
 3. Ethynylestradiol (EE)



Comparison of Surface Polarity between a C₁₈ and ADME column



The caged-structured ADME groups offer interaction with the surface of the silica, resulting in providing a unique selectivity compared to a conventional C₁₈ column.

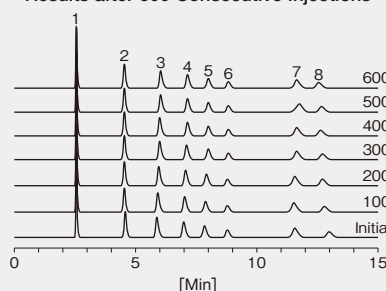
Highly Stable under 100 % Water Mobile Phases

As shown on the right, the efficiency is very stable even after 600 injections under acidic mobile phase.

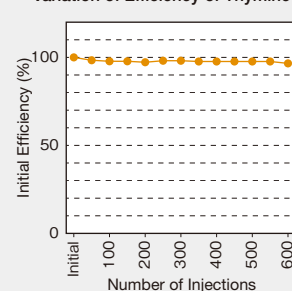
HPLC Conditions

Column size : 2.1 mm i.d. x 150 mm
 Mobile phase: 10 mmol/L HCOONH₄ (Adjusted with formic acid at pH 3)
 Flow rate : 0.2 mL/min
 Temperature: 40 °C
 Detection : UV 254 nm
 Inj. vol. : 1 µL
 Sample : 1. Cytosine 2. Uracil 3. Guanine 4. Hypoxanthine
 5. Xanthine 6. Oxipurinol 7. Allopurinol 8. Thymine

Results after 600 Consecutive Injections



Variation of Efficiency of Thymine



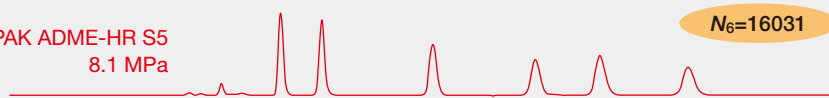
Retention Behavior of Biogenic Amines under 100 % Water Mobile Phase

As shown below, CAPCELL PAK ADME-HR offers stronger retention of polar analytes, resulting in delivering complete separation for all analytes.

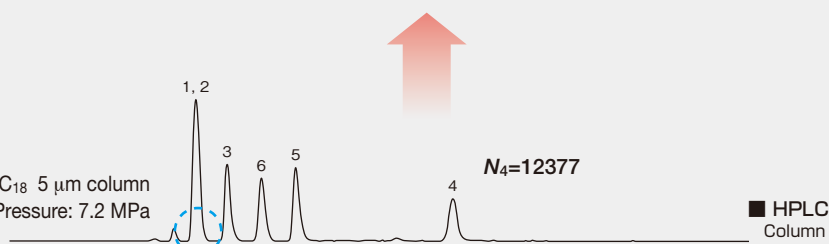
CAPCELL PAK ADME-HR S3
13.6 MPa



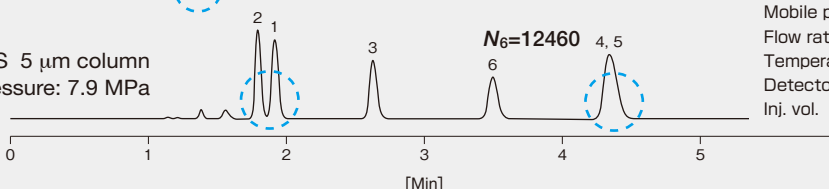
CAPCELL PAK ADME-HR S5
8.1 MPa



Highly Polar C₁₈ 5 µm column
Pressure: 7.2 MPa

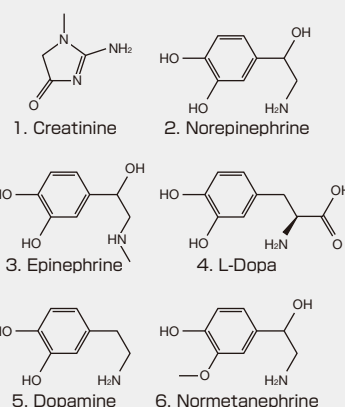


Hybrid ODS 5 µm column
Pressure: 7.9 MPa



HPLC Conditions

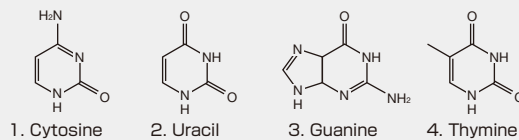
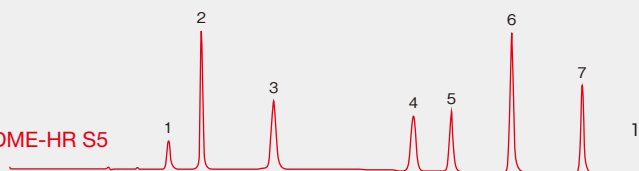
Column size : 4.6 mm i.d. x 150 mm
 Mobile phase: 0.1 vol% HCOOH
 Flow rate : 1.0 mL/min
 Temperature : 40 °C
 Detector : NQAD (Evaporation 60 °C, Nebulizer 30 °C)
 Inj. vol. : 3 µL



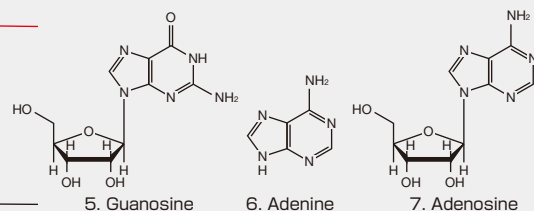
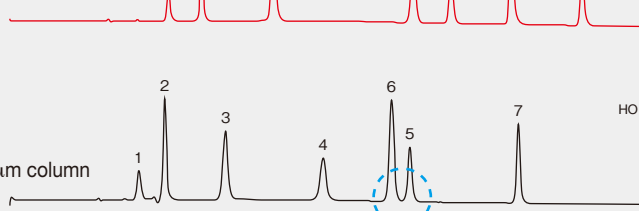
Analysis of Nucleic-Acid Bases and Nucleosides via Gradient Elution

As shown below, the unique selectivity provided from CAPCELL PAK ADME-HR shows complete separation for all analytes, but with stronger retention of polar analytes.

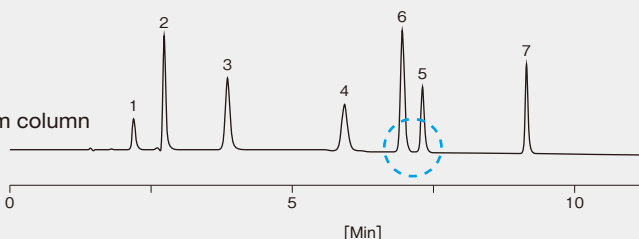
CAPCELL PAK ADME-HR S5



Highly Polar C₁₈ 5 µm column



Hybrid ODS 5 µm column



HPLC Conditions

Column size : 2.0 or 2.1 mm i.d. x 150 mm
 Mobile phase: A) 10 mmol/L HCOONH₄, H₂O
 B) CH₃CN
 B 1 % (0 min) -> 1 % (1 min) ->
 40 % (15 min) -> 1 % (15.1 min) Gradient
 Flow rate : 0.2 mL/min
 Temperature : 40 °C
 Detection : UV 254 nm
 Inj. vol. : 2 µL

Ordering Information

CAPCELL PAK ADME-HR

P/N	Description	Particle Size (μm)	I.D. (mm)	Length (mm)	P/N	Description	Particle Size (μm)	I.D. (mm)	Length (mm)
93300	ADME-HR	2	2.1	20	93350	ADME-HR	5	2.1	20
93301	ADME-HR	2	2.1	50	93351	ADME-HR	5	2.1	35
93302	ADME-HR	2	2.1	100	93352	ADME-HR	5	2.1	50
93303	ADME-HR	2	2.1	150	93353	ADME-HR	5	2.1	75
93310	ADME-HR(1/32)	3	0.3	100	93354	ADME-HR	5	2.1	100
93311	ADME-HR(1/32)	3	0.3	150	93355	ADME-HR	5	2.1	150
93312	ADME-HR	3	1.0	100	93356	ADME-HR	5	2.1	250
93320	ADME-HR	3	2.1	20	93360	ADME-HR	5	3.0	150
93321	ADME-HR	3	2.1	35	93361	ADME-HR	5	3.0	250
93322	ADME-HR	3	2.1	50	93370	ADME-HR	5	4.6	35
93323	ADME-HR	3	2.1	75	93371	ADME-HR	5	4.6	50
93324	ADME-HR	3	2.1	100	93372	ADME-HR	5	4.6	75
93325	ADME-HR	3	2.1	150	93373	ADME-HR	5	4.6	100
93326	ADME-HR	3	2.1	250	93374	ADME-HR	5	4.6	150
93330	ADME-HR	3	3.0	50	93375	ADME-HR	5	4.6	250
93331	ADME-HR	3	3.0	100	93380	ADME-HR	5	10	35
93332	ADME-HR	3	3.0	150	93381	ADME-HR	5	10	150
93340	ADME-HR	3	4.6	35	93382	ADME-HR	5	10	250
93341	ADME-HR	3	4.6	50	93390	ADME-HR	5	20	35
93342	ADME-HR	3	4.6	75	93391	ADME-HR	5	20	50
93343	ADME-HR	3	4.6	100	93392	ADME-HR	5	20	100
93344	ADME-HR	3	4.6	150	93393	ADME-HR	5	20	150
93345	ADME-HR	3	4.6	250	93394	ADME-HR	5	20	250
12600	ADME-HR CARTRIDGE (2PCS)	3	2.0	10	12610	ADME-HR CARTRIDGE (2PCS)	5	2.0	10
12601	ADME-HR CARTRIDGE (2PCS)	3	4.0	10	12611	ADME-HR CARTRIDGE (2PCS)	5	4.0	10
12415	CARTRIDGE HOLDER 10 (L)	-	-	10	12415	CARTRIDGE HOLDER 10 (L)	-	-	10

CAPCELL PAK INERT ADME-HR

P/N	Description	Particle Size (μm)	I.D. (mm)	Length (mm)
95001	ADME-HR	3	2.0	50
95002	ADME-HR	3	2.0	100
95003	ADME-HR	3	2.0	150

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