

MCIGEL™ CHP20 series

MCIGEL™ CHP20 material series are based on a unique rigid polystyrene/ divinylbenzene matrix. A controlled pore size distribution and large surface area offer excellent resolution and the capacity for a wide range of molecules, from small peptides and oligonucleatides up to large proteins. Following tables and pages include specification and supporting data.

CHP20 series are characterized by:

- >> Wide pH operation range
- >> Excellent batch-to-batch reproducibly
- >> Wide application
- >> High chemical stability
- >> Excellent pressure/flow characteristics

Physical and chemical properties

Product name	Base Material	Mean particle size (μm)	Pore size (nm)	pH range
MCIGEL™ CHP20/P20	Styrene/divinylbenzene	20	45	Full range
MCIGEL™ CHP20/P30	Styrene/divinylbenzene	30	45	Full range
MCIGEL™ CHP20/P50	Styrene/divinylbenzene	50	45	Full range
MCIGEL™ CHP20/P70	Styrene/divinylbenzene	70	45	Full range
MCIGEL™ CHP20/P120	Styrene/divinylbenzene	120	45	Full range

Conditions

Column size, 250 x 10 mm I.D.

Eluent, MeOH/50mM phosphate (pH8.0)
= 60/40

Flow rate, 2.18 ml/min

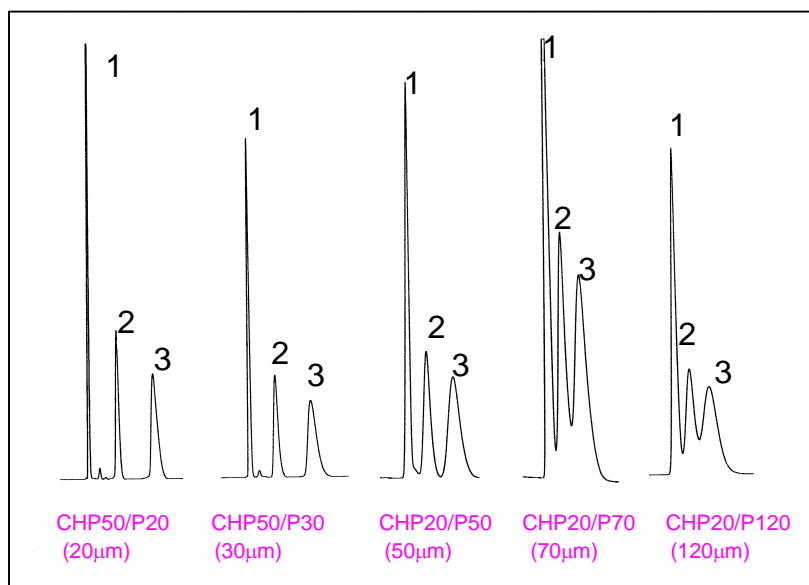
Detection, UV 254 nm.

Sample: 1.6-aminopenicillanic acid (1 g/L)

2.Penicillin G (1 g/L)

3.Penicillin V (1 g/L)

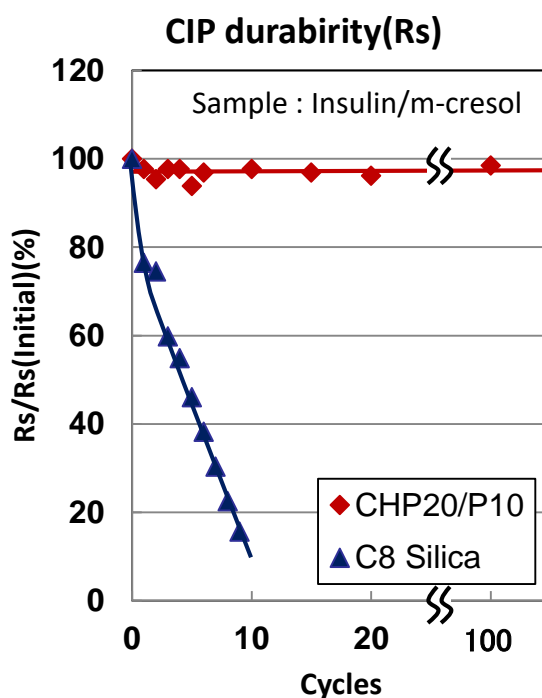
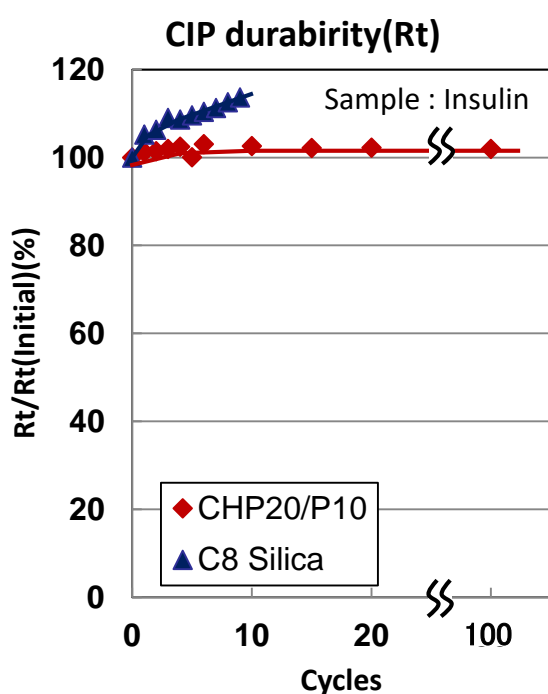
Injection: 100 μL



MCIGEL™ CHP20 series

>> Wide pH stability

The polystyrene divinylbenzene matrix provides MCIGEL™ CHP20 series with chemical stability over a wide pH range. With both an operating and a cleaning ranges cover all pH 1 to 14, both products has broad flexibility in the choice for running conditions and cleaning procedures.



CIP conditions

Regeneration : MeOH/0.2M NaOH=1/1

Volume : 12 CV

Temp. : 50 °C

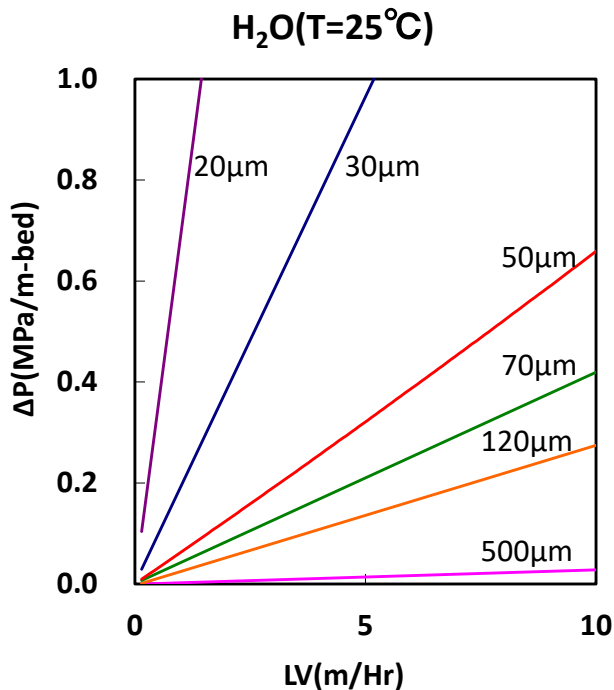
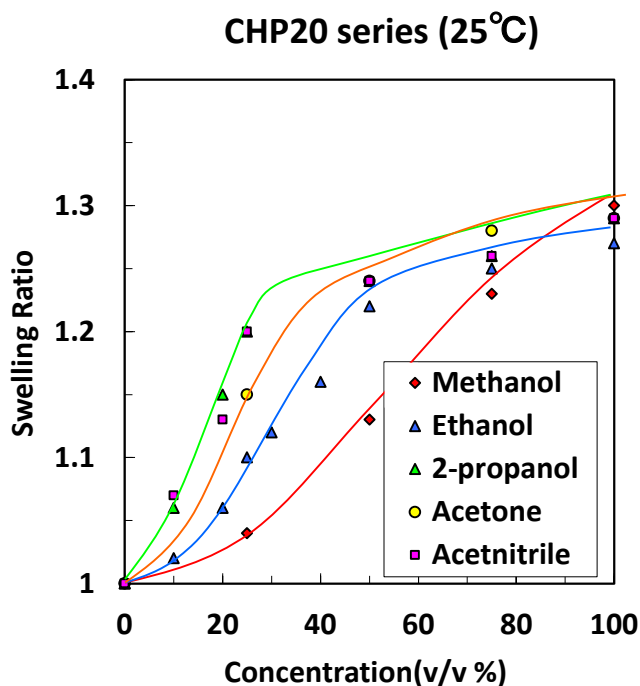
MCIGEL™ CHP20 series

>> Batch-to-batch reproducibility

The combination of a unique manufacturing process and high quality assurance standards results in reproducible bath-to-batch quality. The process gives consistent pore and bead structure, both within and between batches under a strict quality control. All manufacturing is regulated under ISO9001.

>> Excellent pressure/ flow characteristics

CHP20 series are composed of 30 μm diameter beads, spherical in shape and free from broken beads, fragments, and fines. This results in stable and densely packed beds with excellent hydraulic properties shown in the graphs below.



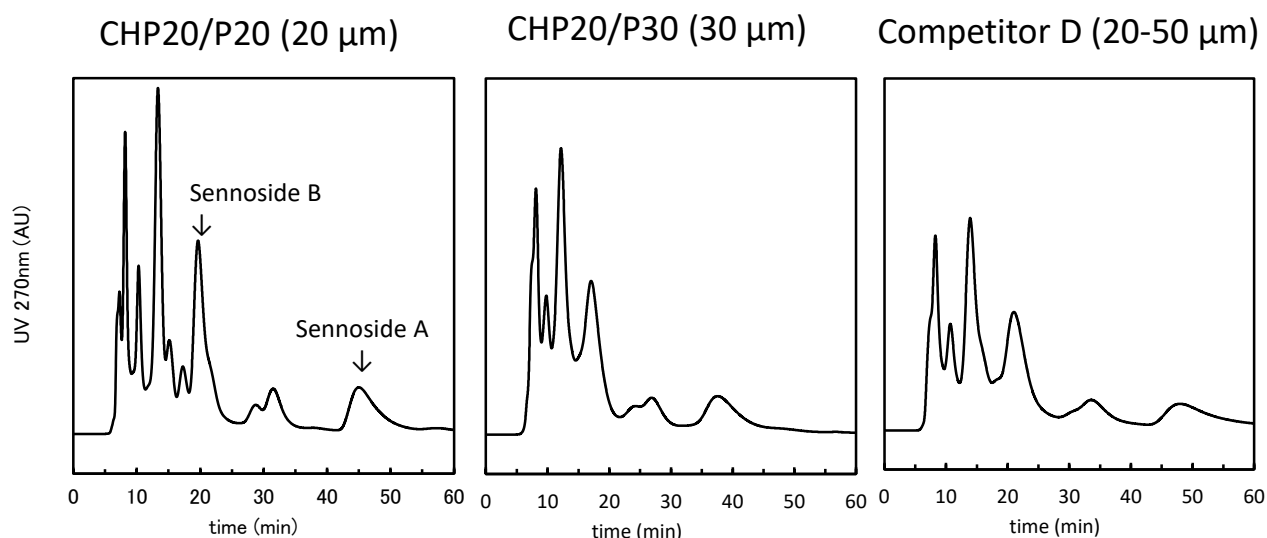
MCIGEL™ CHP20 series

>> Wide application

example: Chromatographic separation of Senna Pulv. Extract

on polystyrenic adsorbents with various particle sizes

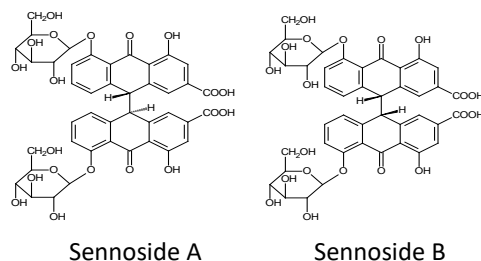
Chromatographic data below shows comparative example of MCIGEL CHP20/P20 against other products available on market.



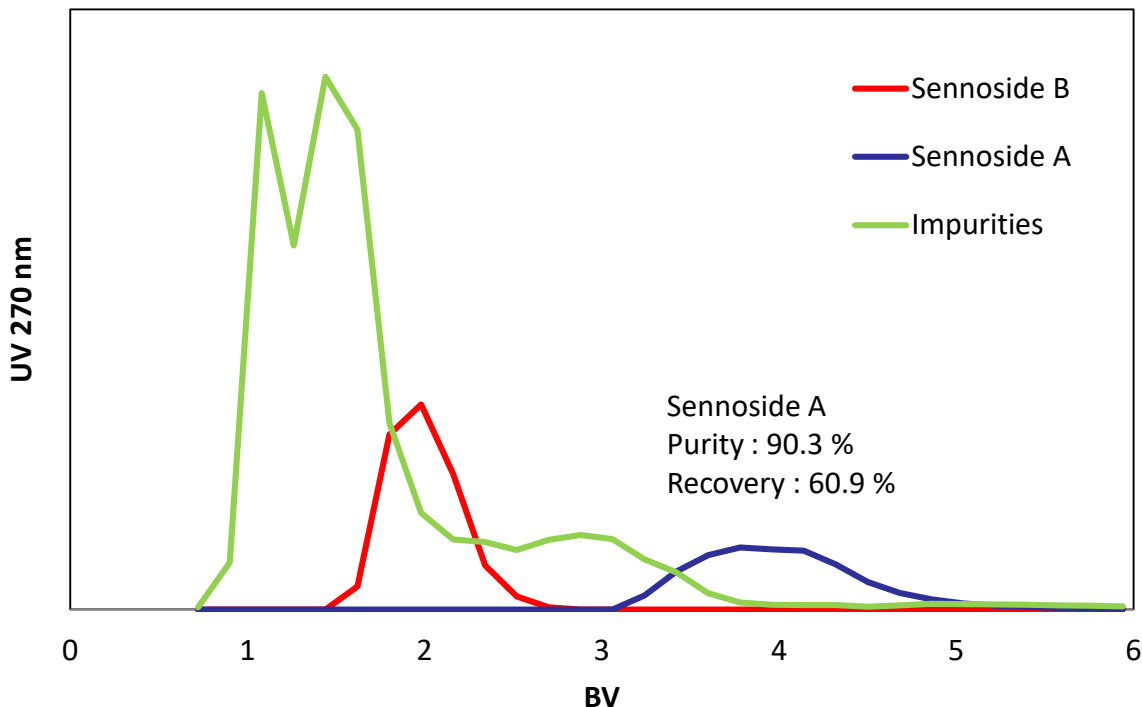
(A) Adsorbent, CHP20/P20 (20 μm); Column size, 250 x 10 mm I.D.;
Eluent, MeOH/1% Acetic acid=60/40; Flow rate, 2.40 mL/min.
Sample: Extract of Senna Pulv. Injection: 80 uL.

(B) Adsorbent, CHP20/P30 (30 μm); Column size, 250 x 10 mm I.D.;
Eluent, MeOH/1% Acetic acid=60/40; Flow rate, 2.40 mL/min.
Sample: Extract of Senna Pulv. Injection: 80 uL.

(C) Adsorbent, Competitor D (20-50 μm); Column size, 250 x 10 mm I.D.;
Eluent, MeOH/1% Acetic acid=60/40; Flow rate, 2.40 mL/min.
Sample: Extract of Senna Pulv. Injection: 80 uL.



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Conditions

Adsorbent : CHP20/P30 (30 μm)

Column size : 490 x 32 mm I.D.;

Eluent : MeOH/1% Acetic acid=60/40

Flow rate : 7.88 mL/min.

Sample: Extract of Senna Pulv. , partially purified by DIAION HP20

Injection : 39.4 mL.

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