Product Data Sheet

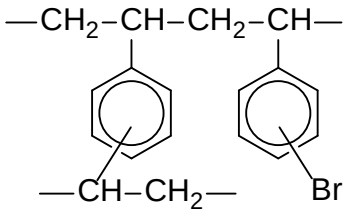
SEPABEADS™ SP207

SEPABEADS™ SP207 is modified highly porous styrenic adsorbents. It has higher hydrophobicity and greater selectivity for non-polar molecules, which is derived from chemically bonded bromine to the aromatic rings, than standard aromatic adsorbents. It is suitable for upward flow and batch processes due to its high particle density.

SEPABEADS™ SP207 is characterized by:

- >> Unique chemical structure and higher hydrophobicity
- >> High particle density
- >>High chemical and physical stability
- >> Excellent batch-to-batch reproducibly
- >> Wide application

Physical and chemical properties

Grade Name		SEPABEADS™ SP207
Bead form		Spherical, porous
Matrix		Modified polystyrene/divinylbenzene
Chemical Structure		
Whole Bead Count	-	95 min.
Shipping Density*	g/L	790
Water content	%	43 - 53
Particle Size Distribution thr. 250 µm	%	10 max.
Effective size	mm	0.25 min.
Uniformity Coefficient	-	1.6 max.
Particle Density*	g/mL	1.18
Specific Surface Area*	m^2/g	600
Pore Volume*	mL/g	1.0
Pore Radius*	Å	110

Note : properties with a mark "*" are referential data.

Swelling ratio in various solvents

Methanol	1.10
Ethanol	1.11
2-Propanol	1.12
Acetone	1.13
Toluene	1.13
Acetonitrile	1.12
Water	1.00

Mitsubishi Chemical Corporation 1-11-2, Osaki, Shinagawa-ku, Tokyo 141-0032, Japan
Tel: +81-3-6748-7146 Fax: +81-3-5487-6810 Web: www.diaion.com/en

Product Data Sheet

SEPABEADS™ SP207

Pore size distribution

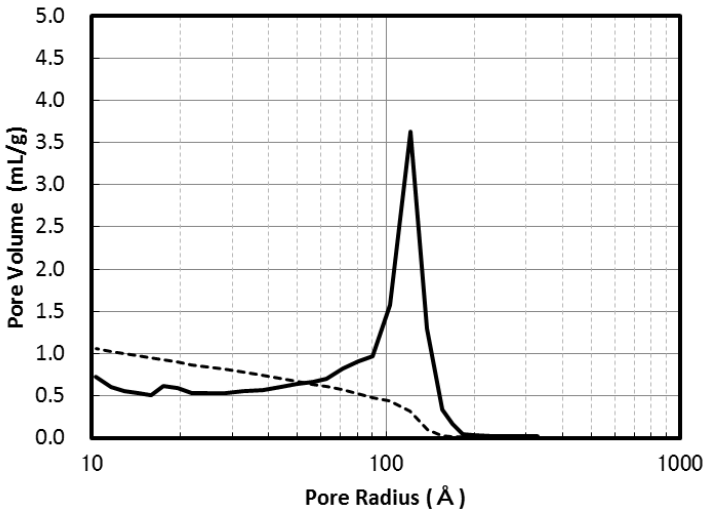


Fig. 1 Pore size distribution of SP207

Recommended Operating Conditions

Maximum Operating Temperature	°C	130
Operating pH Range		0 - 14
Minimum Bed Depth	mm	800
Flow rate	BV/h	Loading 0.5 - 5
	BV/h	Displacement 0.5 - 2
	BV/h	Regeneration 0.5 - 2
	BV/h	Rince 1 - 5
Regenerant		
		Organic solvents for hydrophobic compounds
		Bases for acidic compounds
		Acids for basic compounds
		Buffer solution for pH sensitive compounds
		Water for an ionic solution
		Hot steam for volatile compounds

Mitsubishi Chemical Corporation 1-11-2, Osaki, Shinagawa-ku, Tokyo 141-0032, Japan
Tel: +81-3-6748-7146 Fax: +81-3-5487-6810 Web: www.diaion.com/en

Product Data Sheet

SEPABEADS™ SP207

Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of SEPABEADS™ SP207 resin in normal down flow operation is shown in the graph below.

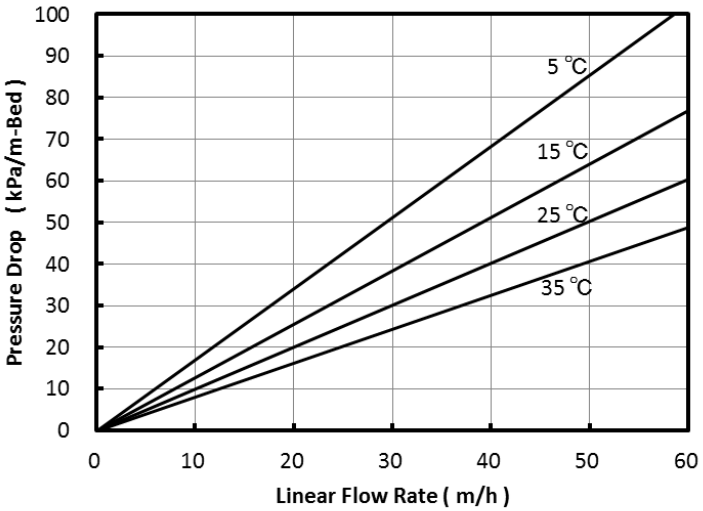


Fig. 2 Pressure Drop of SP207

Applications

- Purification of small peptides, oligonucleotides and proteins
- Adsorption of vitamins, antibiotics, enzymes, steroids and other substance from fermentation solutions
- Decolorization of various sugar solutions
- Adsorption of fatty acids
- Removal of phenol
- Adsorption of various perfume
- Decolorization and purification of various chamicals

Mitsubishi Chemical Corporation 1-11-2, Osaki, Shinagawa-ku, Tokyo 141-0032, Japan
Tel: +81-3-6748-7146 Fax: +81-3-5487-6810 Web: www.diaion.com/en

Product Data Sheet

SEPABEADS™ SP207

Storage condition

Synthetic adsorbents are recommended to store properly in order to avoid a high risk for mold growth. The proper storage typically allows any synthetic adsorbent resin to last for a year after production before onset of any such growth.
The best storage condition is with 20% of alcohol such as ethanol or isopropanol. A 10% or higher concentration of salt solution, such as NaCl, is also recommended to preserve new or used resin for long storage.
In case salt cannot be used, a 0.01 to 0.02 N of NaOH solution could be accepted as mold cannot withstand survival at pH higher than 12.
Storage at freezing temperature should be avoided at all cost as it may cause breakage or crush of resin particles.

Notice

Mitsubishi Chemical Corporation 1-11-2, Osaki, Shinagawa-ku, Tokyo 141-0032, Japan
Tel: +81-3-6748-7146 Fax: +81-3-5487-6810 Web: www.diaion.com/en