

Product Data Sheet

SEPABEADS™ SP207SS

SEPABEADS™ SP207SS is a small size grade based on SEPABEADS™ SP207. 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 applied to reversed phase chromatography.

SEPABEADS™ SP207SS is characterized by:

- >> Unique chemical structure and higher hydrophobicity
- >> High performance for chromatography
- >> Excellent batch-to-batch reproducibly
- >> High chemical and physical stability
- >> Wide application

Physical and chemical properties

Grade Name	SEPABEADS™ SP207SS	
Bead Form	Spherical, porous	
Matrix	Modified polystyrene/divinylbenzene	
Chemical Structure	$\begin{array}{c} \text{---CH}_2\text{---CH---CH}_2\text{---CH---} \\ \qquad \qquad \\ \text{C}_6\text{H}_4 \qquad \text{C}_6\text{H}_3\text{Br} \\ \qquad \qquad \\ \text{---CH---CH}_2\text{---} \end{array}$	
Shipping Density*	g/L	790
Water Content	%	43 - 53
Particle Size Distribution on 150 μm	%	15 max.
Particle Size Distribution 63 - 150 μm	%	70 min.
Particle Size Distribution thr. 63 μm	%	20 max.
Particle Density*	g/mL	1.18
Specific Surface Area*	m ² /g	590
Pore Volume*	mL/g	1.0
Pore Radius*	Å	110

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

Swelling ratio in various solvents

Methanol	1.11
Ethanol	1.17
2-Propanol	1.19
Acetone	1.20
Toluene	1.19
Acetonitrile	1.20
Water	1.00

Pore size distribution

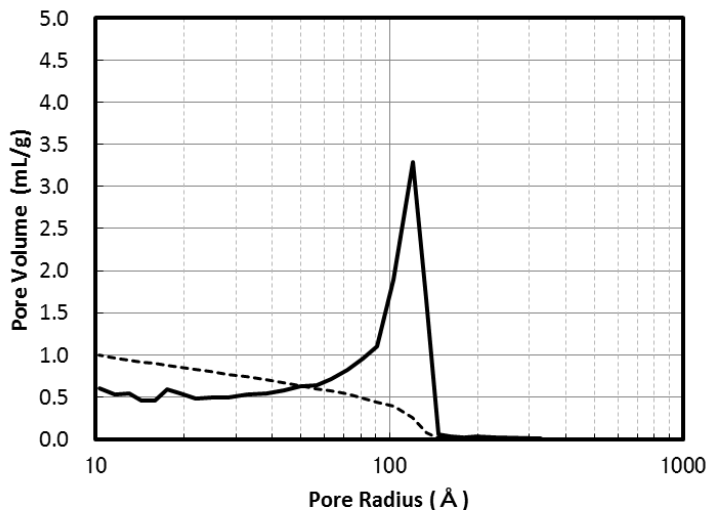


Fig. 1 Pore size distribution of SP207SS

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

Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of SEPABEADS™ SP207SS resin in normal down flow operation is shown in the graph below.

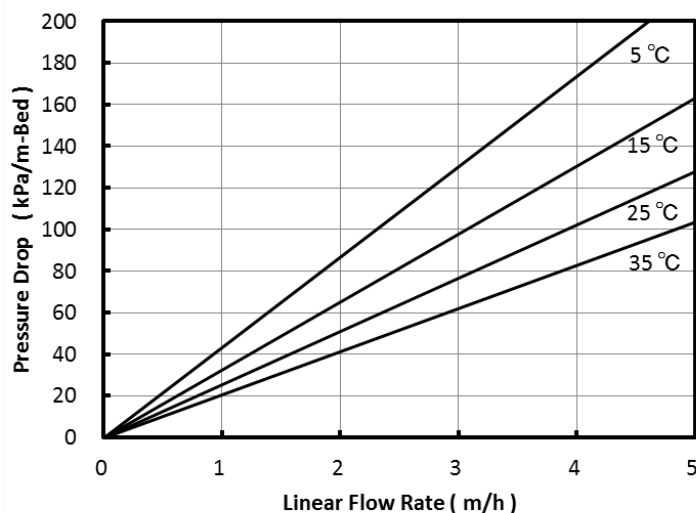


Fig. 2 Pressure Drop of SP207SS

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 chemicals

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

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