

Product Data Sheet

SEPABEADS™ SP850

SEPABEADS™ SP850 is highly porous styrenic adsorbents. It has much larger surface area and a narrower pore size distribution than DIAION™ HP20. It has also smaller pore radius than SEPABEADS™ SP825L. It offers higher capacity for small molecules. This grade is recommended for adsorption, desalting and decolorization.

Product

Grade Name	SEPABEADS™ SP850
Type	Synthetic Adsorbent
Matrix	Styrene-DVB, Porous

Specification

Whole beads count	-	95 min.
Water content	%	46 - 52
Particle Size Distribution thr. 250 μm	%	10 max.
Effective size	mm	0.25 min.
Uniformity Coefficient	-	1.6 max.

Properties

Shipping Density	g/L	690
Particle Density	g/mL	1.01
Specific Surface Area	m ² /g	930
Pore Volume	mL/g	1.1
Pore Radius	Å	45

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	Rinse 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
		1 BV(Bed Volume)=1 m ³ /m ³ -resin

Pore size distribution

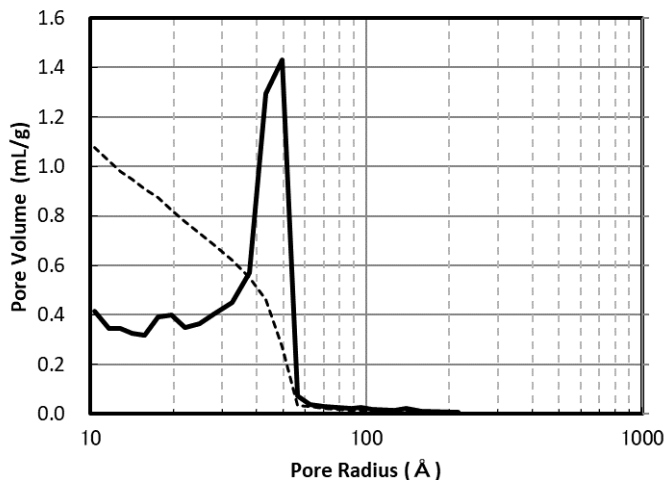


Fig. 1 Pore size distribution of SP850

Swelling Ratio In Various Solvents

Methanol	1.15
Ethanol	1.17
2-Propanol	1.19
Acetone	1.17
Toluene	1.15
Acetonitrile	1.15
Water	1.00

Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of SEPABEADS™ SP850 resin in normal down flow operation is shown in the graphs below.

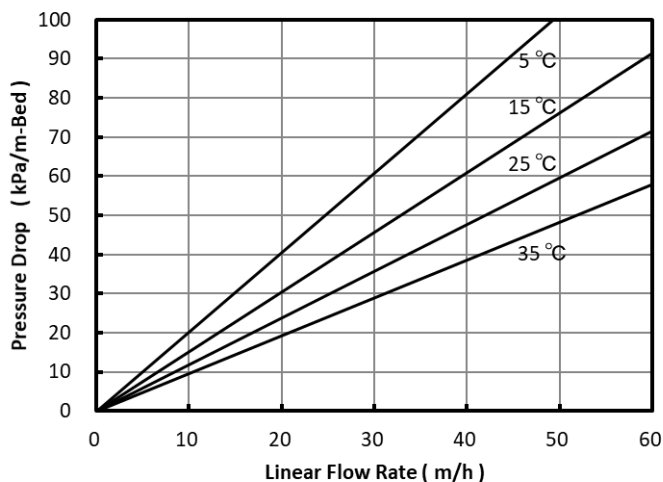


Fig. 2 Pressure Drop of SP850

Indicative Applications

- Purification of Cephalosporin C
- 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 at high risk of mold growth. Accordingly, synthetic adsorbents should be stored properly. Properly stored synthetic adsorbent resins may be stored for up to one year after production before the onset of any mold growth is detected. Optimal storage is with a 20% alcohol solution 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 storage. In case salt cannot be used, a 0.01 to 0.02 N NaOH solution may be acceptable as mold cannot withstand survival at pH higher than 12. Storage at freezing temperatures should be avoided as it may cause breakage or crush certain resin particles.

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