

# 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.

SEPABEADS™ SP850 is characterized by:

- >> Unique pore size distribution
- >> Excellent batch-to-batch reproducibly
- >> Wide application
- >> High chemical and physical stability
- >> Excellent pressure/flow characteristics

## Physical and chemical properties

Grade Name	SEPABEADS™ SP850	
Bead form	Spherical, porous	
Matrix	Polystyrene/divinylbenzene	
Chemical Structure		
Whole beads count	-	95 min.
Shipping Density*	g/L	690
Water content	%	46 - 52
Particle Size Distribution thr. 250 µm	%	10 max.
Effective size	mm	0.25 min.
Uniformity Coefficient	-	1.6 max.
Particle Density*	g/mL	1.01
Specific Surface Area*	m <sup>2</sup> /g	930
Pore Volume*	mL/g	1.1
Pore Radius*	Å	45

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

## 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



## Pore size distribution

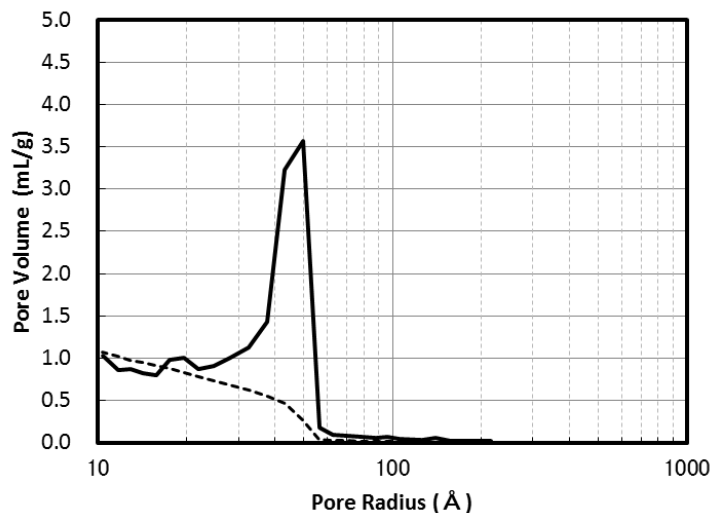


Fig. 1 Pore size distribution of SP850

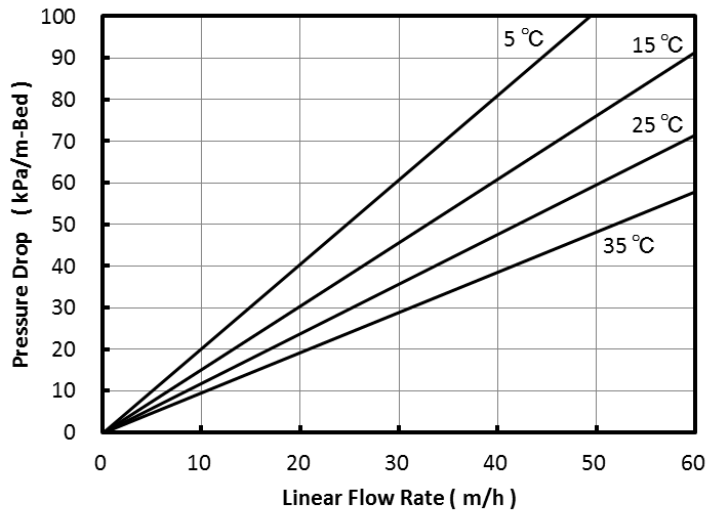
## Recommended Operating Conditions

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™ SP850 resin in normal down flow operation is shown in the graph below.



**Fig. 2 Pressure Drop of SP850**

### 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

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