

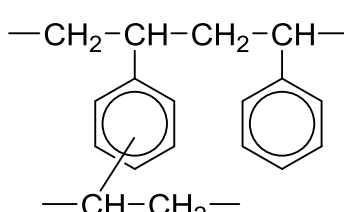
SEPABEADS™ SP20SS

SEPABEADS™ SP20SS is small particle grade based on DIAION™ HP20. 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 oligonucleotides up to large proteins. It offers nice balance of pressure flow characteristics and true chromatographic fractionation and has also been successfully applied in simulated moving bed applications for a variety of small bio molecules.

SEPABEADS™ SP20SS is characterized by:

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

Physical and chemical properties

Grade Name	SEPABEADS™ SP20SS	
Bead Form	Spherical, porous	
Matrix	Polystyrene/divinylbenzene	
Chemical Structure		
Shipping Density*	g/L	680
Water Content	%	55 - 65
Particle Size Distribution on 75 µm	%	30 max.
Particle Size Distribution 63 - 75 µm	%	55 min.
Particle Size Distribution thr. 63 µm	%	15 max.
Particle Density*	g/mL	1.01
Specific Surface Area*	m ² /g	560
Pore Volume*	mL/g	1.2
Pore Radius*	Å	290

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

Swelling ratio in various solvents

Methanol	1.21
Ethanol	1.21
2-Propanol	1.29
Acetone	1.30
Toluene	1.26
Acetonitrile	1.24
Water	1.00



Pore size distribution

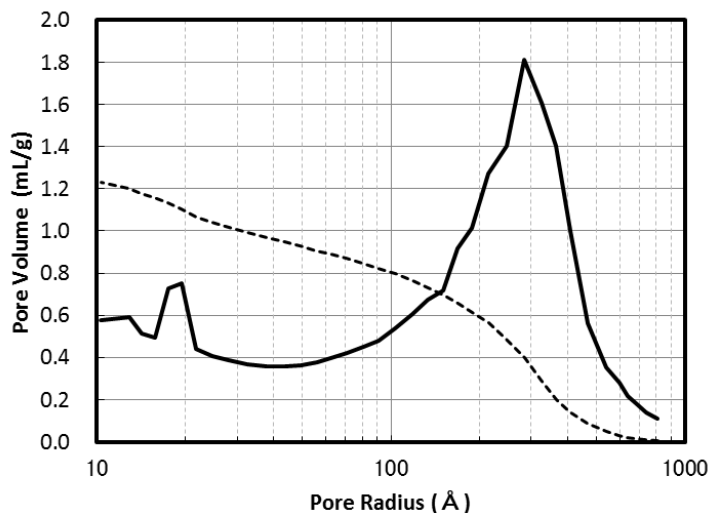


Fig. 1 Pore size distribution of SP20SS

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 DIAION™ SP20SS resin in normal down flow operation is shown in the graph below.

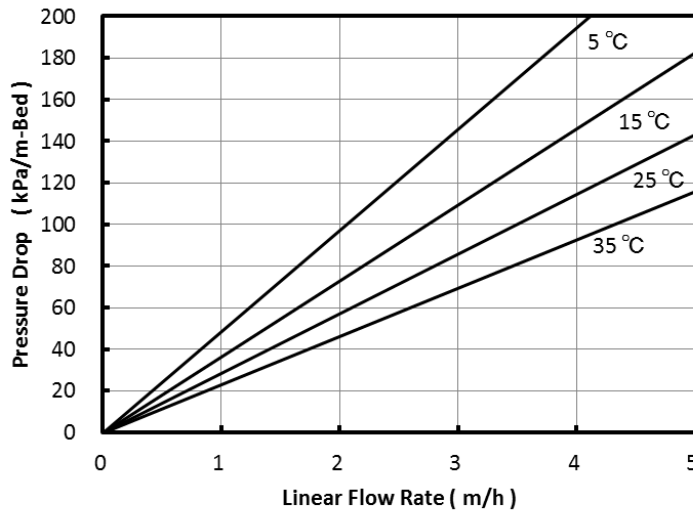


Fig. 2 Pressure Drop of SP20SS

FDA status

SEPABEADS™ SP20SS may be used to process food and beverage products and isolate specialized food additives as intended and such used may be said to fully comply with the Federal Food, Drug, and Cosmetic Act.

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

Notice

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