

# SEPABEADS™ SP70

SEPABEADS™ SP70 is highly porous styrenic adsorbents. It has moderate surface area and a narrower pore size distribution than HP20. It can be adapted to the US FDA standard, CFR 173.65 and used for various food applications.

SEPABEADS™ SP70 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	DIAION™ SP70	
Bead form	Spherical, porous	
Matrix	Poly divinylbenzene / ethylvinylbenzene	
Chemical Structure		
Whole Bead Count	-	95 min.
Shipping Density*	g/L	690
Water content	%	57 - 67
Particle Size Distribution thr. 250 µm	%	5 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	700 min.
Pore Volume*	mL/g	1.5
Pore Radius*	Å	70
DVB extractables	ppb	50 max.

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

## Swelling ratio in various solvents

Methanol	1.15
Ethanol	1.21
2-Propanol	1.11
Acetone	1.21
Toluene	1.20
Acetonitrile	1.18
Water	1.00



## Pore size distribution

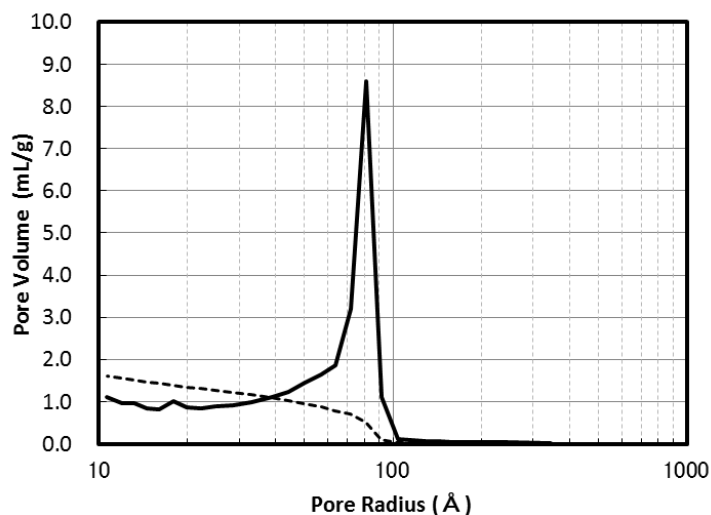


Fig. 1 Pore size distribution of SP70

## 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™ SP70 resin in normal down flow operation is shown in the graph below.

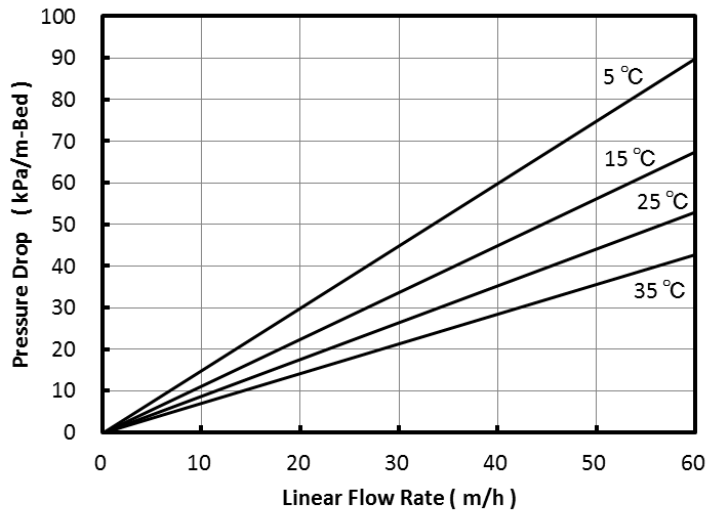


Fig. 2 Pressure Drop of SP70

### FDA status

DIAION™ SP70 has clearance under FDA food Additive Regulation 21 CFR 173.65 - Divinylbenzene Copolymer. The product may be used for the removal of organic substances from aqueous foods under the conditions outlined in 21 CFR 173.65.

### Applications

- Purification of juices
- Removal of naringin and other bittering agents
- Purification of small peptides, oligonucleotides and proteins
- Adsorption of vitamins, antibiotics, enzymes, steroids and other substance from fermentation solutions
- Decolorization and purification of various chemicals

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