

Product Data Sheet

SEPABEADS™ FPDA13

SEPABEADS™ FPDA13 is a porous methacrylate based anion exchange resin. It shows sufficient stability and highly porous hydrophilic nature which makes it suitable for the purification of bio-polymers.

SEPABEADS™ FPDA13 is characterized by:

- >> Unique chemical property and pore size distribution
- >> Excellent performance for purification of bio-polymers
- >> Excellent batch-to-batch reproducibility
- >> Wide application

Physical and chemical properties

Grade Name	SEPABEADS™ FPDA13	
Bead form	Spherical, porous	
Matrix	Crosslinked polymethacrylate	
Chemical Structure	$ \begin{array}{c} \text{CH}_3 \\ \\ \text{---CH}_2\text{---C---} \\ \\ \text{C=O} \\ \\ \text{O} \\ \\ \text{CH}_2 \\ \\ \text{CH-OH} \\ \\ \text{CH}_2 \\ \\ \text{N} \\ / \quad \backslash \\ \text{H}_3\text{CH}_2\text{C} \quad \text{CH}_2\text{CH}_3 \end{array} $	
Total exchange capacity	-	0.7 min.
Shipping Density*	g/L	720
Water content	%	53 - 63
Particle Size Distribution on 212 µm	%	5 max.
Particle Size Distribution thr. 75 µm	%	2 max.
Effective size	mm	0.1 min.
Uniformity Coefficient	-	1.6 max.
Particle Density*	g/mL	1.08
Specific Surface Area*	m ² /g	40
Pore Volume*	mL/g	1.0
Pore Radius*	Å	470

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

Swelling ratio in various solvents

Methanol	1.13
Ethanol	1.09
2-Propanol	1.08
Acetone	1.10
Toluene	1.00
Acetonitrile	1.13
Water	1.00



Pore size distribution

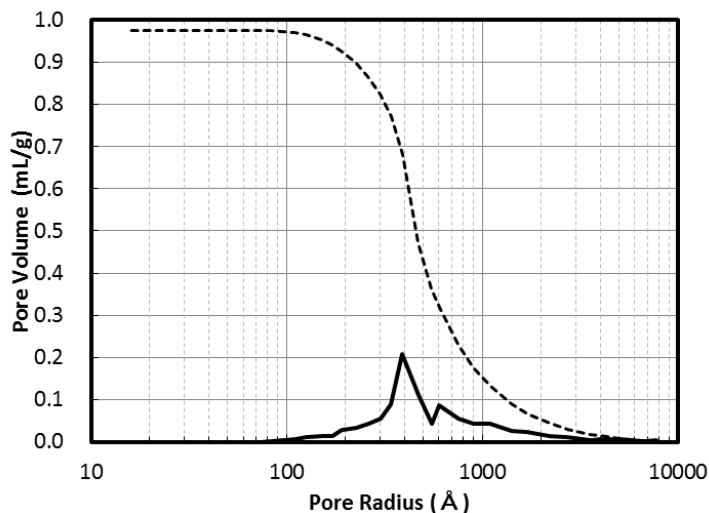


Fig. 1 Pore size distribution of FPDA13

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™ FPDA13 resin in normal down flow operation is shown in the graph below.

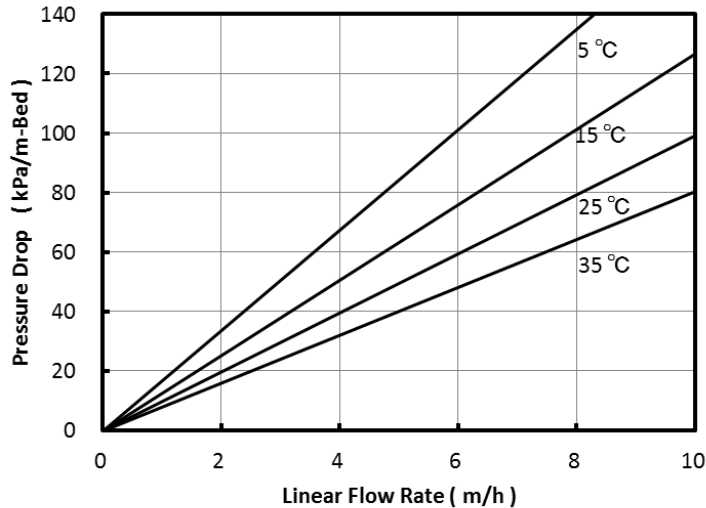


Fig. 2 Pressure Drop of FPDA13

Applications

- 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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