

BioToolomics Gel Filtration (SEC) Media

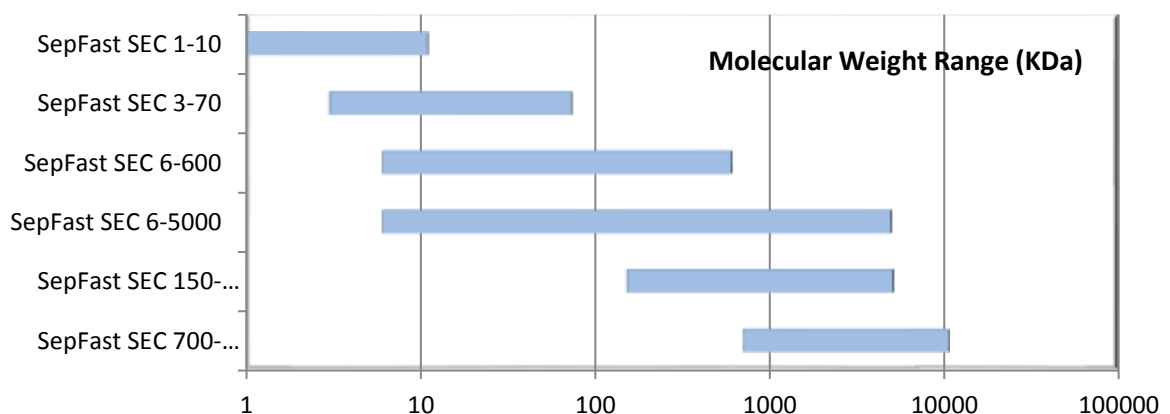
Introduction

Gel filtration (or called size exclusion chromatography) is a proven technique, which is widely used for size-based molecular separations.

SepFast SEC gel filtration media is specially designed for high resolution and high recovery fractionation of biological molecules based on their molecular weights. It is made from a highly cross-linked composite of polysaccharides offering superior flow and resolution properties. It is available in a range of specifications allowing precise resolution of specific molecular weight targets.

SepFast CL and HF gel filtration media is medium resolution, general purpose agarose chromatography media. It has a larger particle size giving low back pressures and is suitable for use in gravity fed columns and for rapid low cost separations of widely different molecular weight target groups. It is available in 3 different agarose contents (2, 4, and 6%) for different molecular weight ranges. SepFast CL range is made of mildly cross-linked agarose beads particularly suitable for gravity flow or very low pressure columns. SepFast HF range is made of highly cross-linked agarose beads particularly suitable for laboratory and industrial applications requiring high flow rates and moderate back pressures.

Regulatory support file is available for GMP grade bioprocessing applications.



SepFast SEC range (for high resolution applications, alternatively to Superdex and Superose from Cytiva)

- SepFast SEC 1-10KDa
- SepFast SEC 3-70KDa
- SepFast SEC 6-600KDa
- SepFast SEC 6-5000KDa
- SepFast SEC 150-5000KDa
- SepFast SEC 700->10,000KDa

Characteristics of SepFast SEC range Media (for high resolution applications)

Matrix	Highly cross-linked agarose or agarose and dextran composites
Particle size	20 – 50 µm
Operational pressure	3 bar (0.3 MPa, 42 psi)
Operating flow velocity	Normally 10-50 cm/hour
pH stability	2-14 (short term) and 3-12 (long term)
Working temperature	4°C – 30°C
Chemical stability	All commonly used buffers; 1 M acetic acid, 1 M NaOH, 6M guanidine hydrochloride, 8 M urea, 30% isopropanol, 70% ethanol
Avoid	Oxidizing agents
Storage	The media should be stored in 20% ethanol to prevent microbial growth. Store the media at a temperature of +2°C to +8°C.

SepFast HF range (for medium resolution high flow applications, alternatively to Sepharose FF from Cytiva)

-SepFast 4HF

-SepFast 6HF

Characteristics of SepFast HF range Media

Matrix	Highly cross-linked agarose
Particle size	~ 50-150 µm
Operational pressure	Up to 3 bar (0.3 MPa, 42 psi)
Operating flow velocity	Normally 50-300 cm/hour
pH stability	2-14 (short term) and 3-12 (long term)
Working temperature	4°C – 30°C
Chemical stability	All commonly used buffers; 1 M acetic acid, 1 M NaOH, 6M guanidine hydrochloride, 8 M urea, 30% isopropanol, 70% ethanol
Avoid	Oxidizing agents
Storage	The media should be stored in 20% ethanol to prevent microbial growth. Store the media at a temperature of +2°C to +8°C.

SepFast CL range (for low flow applications, alternatively to Sepharose CL from Cytiva)

-SepFast CL-2B

-SepFast CL-4B

-SepFast CL-6B

Characteristics of SepFast CL range Media

Matrix	Mildly cross-linked agarose
Particle size	~ 50-150 µm
Operational pressure	Gravity flow
Operating flow velocity	Normally 10-50 cm/hour
pH stability	2-14 (short term) and 3-12 (long term)
Working temperature	4°C – 30°C
Chemical stability	All commonly used buffers; 1 M acetic acid, 1 M NaOH, 6M guanidine hydrochloride, 8 M urea, 30% isopropanol, 70% ethanol
Avoid	Oxidizing agents
Storage	The media should be stored in 20% ethanol to prevent microbial growth. Store the media at a temperature of +2°C to +8°C.

SepFast Desalting Media and pre-packed columns (for desalting / buffer exchange applications, alternatively to Sephadex from Cytiva): contact info@biotoolomics.com for further information

All gel filtration media described above can be supplied in pre-packed column format (e.g. 11 x 300mm, 16 x 600mm, 26 x 100mm, 26 x 600mm, 50 x 600mm etc.): contact info@biotoolomics.com for further information

References Featuring Biotoolomics SepFast SEC Products:

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Jin, J., Tarrant, R.D., Bolam, E.J., Angell-Manning, P., Soegaard, M., Pattinson, D.J., Dulal, P., Silk, S.E., Marshall, J.M., Dabbs, R.A. and Nugent, F.L., 2018. Production, quality control, stability, and potency of cGMP-produced Plasmodium falciparum RH5. 1 protein vaccine expressed in Drosophila S2 cells. *NPJ vaccines*, 3(1), p.32



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