

Product information

Produktinformation

1.16889 / 1.16884 Fractogel[®] EMD DMAE (S), (M)

Ion Exchange chromatography using weak anion exchangers

Fractogel[®] ion exchangers are cross-linked polymethacrylate resins with pore sizes of about 800 Å modified according to the tentacle technology. The Fractogel[®] beads have a high mechanical and chemical stability. Since the functional ion exchanger groups are bonded via linear polymer chains, the ionic groups are accessible for proteins.

Fractogel[®] EMD DMAE is a chromatographic support for the purification of strong acidic and neutral proteins (e.g. plasma proteins), peptides, and nucleic acids.

Due to the titration behaviour the ion exchange capacity can be used from pH 2 up to pH 8.5. The separation of proteins is based on reversible electrostatic interactions between the negatively charged regions of the proteins surface and the support. Proteins are retained efficiently on Fractogel[®] EMD DMAE when the pH of the buffer is about 1 unit above their isoelectric points (pI).

The strength of the binding depends on:

- the buffer system
- pH value of the buffer which determines the surface charge of the protein
- the degree of the ionisation of the functional groups of exchanger
- the concentration of the counter ions
- the charge density on the support (protein binding capacity)

Properties of the tentacle ion exchanger

Cat. No.	1.16889, S-Type	1.16884, M-Type
Bulk material	100 ml, 500 ml, 5 l (S)	100 ml, 500 ml, 5 l (M)
Particle size	20 – 40 µm (S)	40 – 90 µm (M)
Type of chromatography	Weak anion exchange chromatography	
Functional group	Dimethylaminoethyl group (DMAE)	
Protein binding capacity	100 mg BSA/ml of gel	
pK value	about 10	
pH stability range	pH 2 up to pH 13	
Elution conditions	High salt concentrations	
Pressure limit	8 bar	
Operating temperature	4 °C to room temperature	
Storage, preservative	20 % ethanol, 150 mmol/l NaCl	
Regeneration	1 – 2 M NaCl	
Sanitization	0.1 – 0.5 M NaOH, sodium lauroyl sarcosinate	
Linear flow rate	Up to 360 cm/h (S-type); up to 400 cm/h (M-type)	