

Product information

Produktinformation

1.16887 / 1.16881 Fractogel[®] EMD TMAE (S), (M)

Ion Exchange chromatography using strong 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 TMAE is a chromatographic support for the purification of acidic and neutral proteins and peptides, immunoglobulines and for DNA removal.

Due to the titration behaviour the ion exchange capacity can be used from pH 2 up to pH 12. 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 TMAE 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 concentration of the counter ions
- the charge density on the support (protein binding capacity)

Properties of the tentacle ion exchanger

Cat. No.	1.16887, S-Type	1.16881, 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	Strong anion exchange chromatography	
Functional group	Trimethylammoniummethyl group (TMAE); “Q-type”	
Protein binding capacity	100 mg BSA/ml of gel	
pK value	> 13	
pH stability range	pH 2 up to pH 12	
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)	