Product information
Produktinformation

1.16891 / 1.16886 Fractogel® EMD COO⁻ (S), (M)

Ion Exchange chromatography using weak cation 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 COO⁻ is a chromatographic support for the purification of basic and neutral proteins and peptides.

Due to the titration behaviour the ion exchange capacity can be used from pH 6 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 COO⁻ when the pH of the buffer is about 1 unit below their isoelectric points (pl).

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 the exchanger
- the concentration of the counter ions
- the charge density on the support (protein binding capacity)

Properties of the tentacle ion exchanger

Cat. No.	1.16891, S-Type	1.16886, 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 cation exchange chromatography	
Functional group	Carboxy ethyl group	
Protein binding capacity	100 mg lysozyme/ml of gel	
pK value	about 4.5	
pH stability range	pH 1 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)	