Product information
Produktinformation

1.14894 Fractogel® EMD SE Hicap (M)

Ion Exchange chromatography using strong 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 SE is a high capacity chromatographic support for ion exchange chromatography of neutral and basic peptides and proteins. It exhibits extraordinary high binding capacity for antibodies and insuline-like peptides (8 – 10 g peptide/l of swollen gel). In addition, the high capacity is maintained even under high flow rates.

Depending on the application, the selectivity of the SE support might be different compared to the strong cation exchangers, which utilize sulfopropyl or sulfoisobutyl exchanger groups.

Elution can be performed using a stepwise gradient or linear gradient of increasing salt concentrations. Proteins are retained efficiently on Fractogel® EMD SE when the pH of the buffer is about 1 unit below 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 high capacity strong tentacle cation exchanger

Cat. No.	1.14894
Bulk material	100 ml, 500 ml, 5 l
Particle size	40 – 90 µm
Type of chromatography	Strong cation exchange chromatography
Functional group	Sulfoethyl group
Protein binding capacity	about 160 mg lysozyme/ml of gel
pH stability range	pH 1 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, 0.1 – 0.5 M NaOH
Sanitization	0.1 – 0.5 M NaOH, sodium lauroyl sarcosinate, autoclaving
Linear flow rate	Up to 400 cm/h