



Proteomix POR IEX

Ion Exchange Packing Manual

1. Product introduction

Proteomix POR IEX ion exchange chromatography media is specially designed for the separation and purification of biological samples. Proteomix POR15-S/Q is based on PS/DVB, with a particle size of 15 μm , a uniform particle size and a pore size of 1000 \AA . It has good physical and chemical stability and better pressure resistance. The surface of the Proteomix POR15-S/Q chromatography medium is treated with a special hydrophilic coating of Safran, which has better hydrophilicity and avoids non-specific adsorption with biological samples to the greatest extent. And through the proprietary surface modification technology, different spacer arms and ion exchange functional groups are bonded on the surface of the hydrophilic matrix to obtain chromatography media such as strong cation exchange (S) and strong anion exchange (Q), and ensure the surface ion High density and uniformity of the exchange layer. Proteomix POR15-S/Q ion exchange chromatography media can be widely used in the separation and purification of biological samples such as vaccines, insulin, proteins, nucleic acids, and heparin.

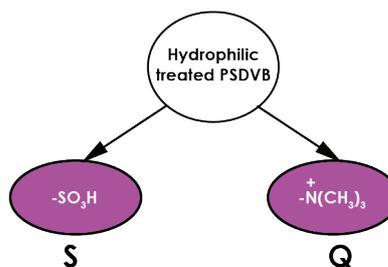
2. Media technical parameters

Table 1. Technical parameters of Proteomix POR15-S/Q

Media Type	Proteomix POR15-S	Proteomix POR15-Q
Matrix	Hydrophilization-modified polystyrene/divinylbenzene (PS/DVB) microspheres	
Functional group	$-\text{SO}_3\text{H}$	$-\text{N}^+(\text{CH}_3)_3$
Particle size (μm)	15	
Pore size (\AA)	1000	
Dynamic capacity* (/mL packing)	≥ 40 mg Lysozyme	≥ 40 mg BSA
Maximum Linear Flow Rate	1800 cm/h	

Chemical composition of the medium surface

Figure 1. Schematic diagram of the surface chemical composition of Proteomix POR15-S/Q



Properties

- High binding capacity and excellent biocompatibility
- Rigid matrix withstands high pressures and high flow rates
- High resolution, high column efficiency and high recovery
- High batch-to-batch reproducibility
- easy to zoom in
- Highly hydrophilic surface with negligible nonspecific adsorption
- Small volume change under conventional packing conditions
- Product supply capacity: >100 L

Recommended operating line flow rate	150-900 cm/h	
Operating temperature	4-40°C	
pH-Range	working: 2-13 short term: 1-14 long term: 2-13	working: 2-12 short term: 1-14 long term: 2-12
Operating pressure	≤ 10 MPa (100 bar)	
Mobile Phase Compatibility	Suitable for buffer salt system (Tris, phosphate, acetate buffer, etc.), conventional organic phase/aqueous system (acetonitrile, ethanol, etc.)	
Long-term storage method	20% ethanol or 2% benzyl alcohol	
Reproduction	1-2 M NaCl, or 0.5-1.0 M NaOH	
CIP	0.5 M HCl or 0.5-1.0 M NaOH, impurities with strong hydrophobic binding can be washed with 0.1-1% Tween	

Dynamic capacity (Dynamic Binding Capacity) test method:

Proteomix POR15-S: The linear flow rate was 360 cm/h and the loading solution was 1 mg/mL lysozyme in 50 mM phosphate buffer (pH = 6.0). Proteomix POR15-Q: The linear flow rate was 180 cm/h, and the loading solution was 2 mg/mL bovine serum albumin in 50 mM Tris buffer (pH = 8.5).

3. Product preservation

The chromatographic medium that is not used temporarily should be stored in a closed aqueous solution containing 20% ethanol at 4-35°C; the medium that has been loaded into the chromatography column can be stored in an aqueous solution containing 20% ethanol at 4-35°C. Strong anion (Q) packings should not be stored statically at high pH (including 10 mM NaOH) for prolonged periods of time. Cation exchange packing can be stored in 10 mM NaOH for more than 6 months, try to avoid long-term storage of lye, so as to avoid the deterioration of packing performance.

4. Ordering Information

Product Series	Product name	Types of functional groups	Particle size/pore size	PN
Proteomix POR IEX	Proteomix POR15-S	Strong cation exchange	15 μm, 1000 Å	221115950
	Proteomix POR15-Q	Strong anion exchange	15 μm, 1000 Å	221415950

*Packaging specifications are 1, 5, 10, 50 L, and prepacked column specifications are 1, 4.2, 5 mL. Other specifications and prepacked columns can also be provided according to customer needs.