

WorkBeads™ 17 Q

WorkBeads™ 17 S



High Performance Ion-Exchange Columns for Analytical and Semi-Preparative Purification of Proteins.

- **Made from agarose, well established and well-known in the biotech industry**
- **Outstanding resolution even at high protein loads due to the use of a highly selective 17 um ion exchange media**
- **Robust separation results can be achieved across a wide range of proteins and separation conditions**
- **Ready for immediate use in most chromatography systems in the market**

Media Description

WorkBeads™ 17 Q and WorkBeads™ 17 S ion exchange media are produced from agarose using a proprietary cross linking method that results in a highly porous and physically stable agarose matrix. Agarose based matrices have been successfully used for decades in biotechnology research and in the industrial purification of proteins. Agarose is proven to be exceptionally compatible with natural bio molecules such as proteins, DNA carbohydrates etc. The material shows minimal non specific interaction due to the hydrophilic nature of agarose. Unlike matrices made from synthetic polymers, agarose does not have micro pores that can contribute to local pH variations in the microenvironment in the column which lead to distorted separations.

WorkBeads™ 17 Q and WorkBeads™ 17 S ion exchange media have a high selectivity, which means the protein peaks are well separated with greater distance from each other than comparable products made from synthetic polymers. This means that the media has the capacity to separate proteins well even when using high protein loadings.

Resolution is the combined effect of selectivity (distance between peaks) and efficiency (peak width, depending on particle size). Separation media based on agarose are well known for excellent selectivity. **WorkBeads™ 17 Q and WorkBeads™ 17 S** media are based on a small particle size of 17 mi-

cometers with a very narrow size distribution that in combination with the proprietary cross linking results in columns packed with very high efficiency and good flow characteristics.

Applications

WorkBeads™ 17 Q and WorkBeads™ 17 S ion exchange media are designed for high performance protein separations under a variety of conditions. The high resolution that can be obtained makes this chromatography media ideal for both demanding analytical separations and semi preparative work.

Fig. 1 below shows a typical separation of egg white proteins on **WorkBeads 17 Q** using a standard linear gradient of sodium chloride.

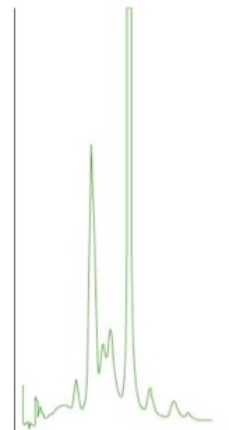


Fig. 1

Separation Media Characteristics

	WorkBeads™17 Q	WorkBeads™17 S
Agarose Content	7.4 - 7.8	7.4 - 7.8
Protein Capacity	Test Protein BSA, 130 mg/mL	Test Protein IgG, 70 mg/mL
Ionic Group	Quaternary Amine	Sulphonic Acid
Ionic Capacity (mmol/ml)	0.18-0.26	0.18-0.26
Particle Size (microns)	16-18	16-18
pH Stability	pH 1-14	pH 1-14
Solvent Stability	100% methanol, 100% ethanol, 8 M urea, 6 M guanidine hydrochloride, 30% acetonitril, 70% formic acid, 30% trifluoroacetic acid	

Column Sizes

WorkBeads™17 Q and WorkBeads™17 S ion-exchange agarose media comes pre-packed in analytical grade columns with the following dimensions:

Media Volume (ml)	Internal Diameter (mm)	Bed Height (mm)
4.3	8	85

The columns are preserved with 22% ethanol

Column Specifications

Maximum Operating Flow Rate	4 ml/min
Optimal Operating Flow Rate	0.5 - 2.0 ml/min
Operating Temperature	4 - 40 °C
pH Stability	1-14
Cleaning	Columns can be sanitized with 0.5 M NaOH or 70% ethanol.
Materials in Contact with Eluent	Borosilicate glass (chromatographic tube), titanium (filter), PEEK (polyetheretherketone) (tubing), EPDM (O-ring), PVDF (polyvinylidifluoride) (adaptor).
Solvent Resistance	Methanol, ethanol, 8 M urea, 6 M guanidinium hydrochloride, 30% acetonitrile, 70% formic acid, 1 M sodium hydroxide, 0.1 M hydrochloride acid, 5% sodium do-decyl sulphate, 5% 2-mercaptoethanol, 30% acetic acid, 0.1% trifluoroacetic acid.
Mesh Size of the Net	10 microns

ORDERING

Product Name	Column Size / Volume	Order Number
WorkBeads™ 17 Q	Pre-Packed Column – 4.3 ml (8x85mm)	17 100 102
WorkBeads™ 17 S	Pre-Packed Column – 4.3 ml (8x85mm)	17 200 102

To purchase Bio-Works separation media contact your local distributor. You may also email, fax or phone Bio-Works directly at:

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