

WorkBeads™ 40 DEAE



Ion Exchange Media for Preparative and Bioprocess Scale Purification of Proteins

- Made from agarose, well established and well-known in the biotech industry
- High throughput and resolution
- Reliable and reproducible
- High chemical stability for easy cleaning in place
- Easy and reliable scale up

Media Description

WorkBeads™40 DEAE 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 like 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™ 40 DEAE 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 capacity to separate proteins well even when using high proteins loadings. DEAE is a weak ion exchanger meaning that above pH 9 and higher there will be very few ion exchange groups facilitating CIP. The charge density is also lower than WorkBeads 40 Q which will give a different selectivity.

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. The particle size of 40 micrometer with a very narrow particle size distribution in combina-

tion with the proprietary cross linking results in columns packed with very high efficiency and excellent flow characteristics well suited to demanding bioprocess applications.

Applications

WorkBeads 40 DEAE ion exchange media are designed for high throughput protein separations under a variety of conditions. The high resolution that can be obtained at high protein loadings and high flow rates makes it ideal for process applications. The chemical stability means it is easy to develop cleaning in place (CIP) protocols using sodium hydroxide.



	WorkBeads 40 DEAE
Agarose content %	7.5-7.8
Ionic Group	Di-ethylaminoethyl
Ionic capacity mmol/mL	0,10-0.16
Dynamic Protein Capacity: mg BSA/mL at 60 cm/h (column 0.8x 5 cm)	85
Max flow rate at 20 cm bed height and 5 bar, cm/h (col- umn 0.8x 5 cm)	>500
Particle Size, µm	32-60
pH Stability	pH 1-14
Solvent stability	100% methanol, 100% ethanol, 8 M urea, 6 M guanidine hydrochloride, 30% acetonitril, 70% formic acid, 30% trifluoroacetic acid

ORDERING

Product Name	Column Size / Volume	Article Number
WorkBeads 40 DEAE	Bulk Media - 25 ml	40 150 001
WorkBeads 40 DEAE	Bulk Media - 200 ml	40 150 002
WorkBeads 40 DEAE	Bulk Media – 1 Litre	40 150 010
WorkBeads 40 DEAE	Bulk Media – 5 Litre	40 150 050

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

eMail: info@bio-works.net

For more information about Bio-Works Company Ltd., please visit our website at: www.bio-works.net.

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