Agarose Bead Technologies

SIZE EXCLUSION CHROMATOGRAPHY

Rapid Run™ Agarose Beads

DESCRIPTION

Rapid RunTM beads are based on highly cross-linked 4% and 6% agarose matrices and therefore are an excellent choice for Affinity, Ion exchange, Hydrophobic interaction, Immobilized Metal Affinity support and other applications requiring higher flow rates and pressure.
Detailed below are some recommendations to consider in column packing and equilibration as well as in the subsequent sample application.

INSTRUCTIONS

COLUMN PACKING

1. Manually shake the bottle to obtain a homogenous suspension of Rapid RunTM Agarose Beads and preservative. Place a funnel in the head of the column and slowly run the suspension down the walls of the column.
Note: it is advisable to make the addition slowly to avoid formation of bubbles. The product may also be degassed before it is added to the column.

2. Add the resin suspension until the desired column height is obtained.

3. Insert the adapter gently in the column head until it begins to displace the liquid and make sure no air is trapped under the net.

4. Connect the pump to the column and begin the removal of the preservative by washing with distilled water. Observe the column height as the distilled water passes through the column.

5. When a constant height has been obtained, maintain the flow with the addition of 5 volumes of distilled water to completely eliminate the preservative.

6. Equilibrate the column with 2 - 5 volumes of elution buffer.
Note: It is advisable to previously de-gas all the solutions before adding them to the column to avoid formation of bubbles. It is also advisable to add at least 0.2M of NaCl to the equilibration buffer to avoid ionic interactions.

7. It is advisable to utilize sample volumes of about 2-5% of the entire volume of the column.

8. For regeneration and later reuse of agarose beads, washing the column with 3 volumes before re-equilibrating with a new buffer is recommended.

Note: If poor resolution or strange pressures are observed, it is advised to insert a washing step before proceeding to the re-equilibration step. This washing step can be done at a high ionic strength (thus eliminating precipitated or nonspecifically bound proteins) or adding a non-ionic detergent.

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9. A Clean in Place (CIP) protocol is recommended after some cycles as the starting material could generate tightly bound, precipitated or denatured substances.

10. A sanitization process using NaOH 1M can also be a good alternative to CIP, reducing microbial contamination of the bed column.

It is advisable to keep the product in an appropriate preservative between uses.

PRODUCT	STUDIES	REAGENTS
Rapid Run™ Agarose Beads	Thermical Stability	Autoclavable 30 minutes at 121ºC at pH 7.
	Chemical Stability	Most commonly used aqueous and organic solutions including 1M NaOH, 8 M Urea, 5M guanidine hydrochloride. 75% ethanol. Resistant to biological degradation.
	Physical Stability	Negligible volume variation due to changes in pH or ionic strength.